UNITED
NATIONS

LOS

UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

Distr.
GENERAL

LOS/PCN/153 (Vol. VII)
28 June 1995
ENGLISH
ORIGINAL: ARABIC/CHINESE/
ENGLISH/FRENCH/
RUSSIAN/SPANISH

PREPARATORY COMMISSION FOR THE
INTERNATIONAL SEABED AUTHORITY
AND FOR THE INTERNATIONAL
TRIBUNAL FOR THE LAW OF THE SEA

REPORT OF THE PREPARATORY COMMISSION, UNDER PARAGRAPH 11 OF RESOLUTION I OF THE THIRD UNITED NATIONS CONFERENCE ON THE LAW OF THE SEA, ON ALL MATTERS WITHIN ITS MANDATE, EXCEPT AS PROVIDED IN PARAGRAPH 10, FOR PRESENTATION TO THE ASSEMBLY OF THE INTERNATIONAL SEABED AUTHORITY AT ITS FIRST SESSION

VOLUME VII

Working papers of Special Commission 1
(LOS/PCN/SCN.1/WP.1 to LOS/PCN/SCN.1/WP.2/Add.5)

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CONTENTS

Page

LOS/PCN/SCN.1/WP.1 General considerations in studying the problems which would be encountered by developing land-based producer States likely to be most seriously affected by the production of minerals derived from the Area (Background paper by the Secretariat) 4

LOS/PCN/SCN.1/WP.2 Basic data and information of relevance to the work of Special Commission 1 (Part A)

I. Minerals that may be produced from the international Area

II. Profiles of the copper, nickel, cobalt and manganese industries

III. Types and sources of requisite statistics (Background paper by the Secretariat) . 25

LOS/PCN/SCN.1/WP.2/Add.1 Basic data and information of relevance to the work of Special Commission 1 (Part B). Addendum

I. Data on production, consumption, exports, imports and prices of copper, nickel, cobalt and manganese

II. Information on developing land-based producer States (Background paper by the Secretariat) . 48

LOS/PCN/SCN.1/WP.2/Add.2 Basic data and information of relevance to the work of Special Commission 1 (Part C). Addendum
Information on existing international or multilateral economic measures which could be of relevance to the work of Special Commission 1 (Background paper by the Secretariat) 134

LOS/PCN/SCN.1/WP.2/Add.3 Basic data and information of relevance to the work of Special Commission 1. Addendum
Responses from States/entities to the note verbale transmitted by the Secretary-General 148

/...

CONTENTS (continued)

		Page
LOS/PCN/SCN.1/WP.2/Add.4	Basic data and information of relevance to the work of Special Commission 1. *Addendum* Recycling of copper, nickel, cobalt and manganese (*Background paper by the Secretariat*)	202
LOS/PCN/SCN.1/WP.2/Add.5	Basic data and information of relevance to the work of Special Commission 1. *Addendum* (*Background paper by the Secretariat*)	224

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LOS/PCN/SCN.1/WP.1
28 February 1984

ORIGINAL: ENGLISH

Preparatory Commission for the International
Sea-Bed Authority and for the International
Tribunal for the Law of the Sea
Special Commission 1

GENERAL CONSIDERATIONS IN STUDYING THE PROBLEMS WHICH WOULD BE ENCOUNTERED BY DEVELOPING LAND-BASED PRODUCER STATES LIKELY TO BE MOST SERIOUSLY AFFECTED BY THE PRODUCTION OF MINERALS DERIVED FROM THE AREA

Background paper by the Secretariat

CONTENTS

	Paragraphs	Page
Introduction	1 - 2	5
I. Provisions in the Convention	3 - 7	5
II. The mineral market mechanism	8 - 13	7
III. Possible effects of the production from Sea-Bed	14 - 17	8
IV. Difficulties of developing land-based producer States	18 - 27	9
V. Approaches and possible measures for minimizing difficulties	28 - 42	11
VI. Concluding remarks	43	14
Annex		17

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INTRODUCTION

1. Pursuant to resolution I, paragraph 5 (i), the Preparatory Commission shall:

> "undertake studies on the problems which would be encountered by developing land-based producer States likely to be most seriously affected by the production of minerals derived from the Area with a view to minimizing their difficulties and helping them to make the necessary economic adjustment, including studies on the establishment of a compensation fund, and submit recommendations to the Authority thereon."

According to resolution I, paragraph 9:

> "The Commission shall establish a special commission on the problems which would be encountered by developing land-based producer States likely to be most seriously affected by the production of minerals derived from the Area and entrust to it the functions referred to in paragraph 5 (i)."

At the conclusion of the resumed first session, the Preparatory Commission established Special Commission 1 for this purpose and the Chairman of the Commission requested the Secretariat to prepare background papers for various organs of the Commission, including Special Commission 1 in order to facilitate the conduct of the Commission's work.

2. The present paper, prepared in response to that request, deals with some general considerations which are intended to facilitate the substantive work of Special Commission 1 in studying the problems of developing land-based producer States and in formulating necessary measures. With a view to defining the scope of the work of the Special Commission and to assisting in the organization of its work, as a very initial step, brief discussions are included of issues related to the identification of the difficulties of developing states and the possible measures for minimizing the difficulties of these States. An annex to the paper presents data on current land-based production of the minerals that are likely to be derived from the Area, namely, copper, nickel, cobalt and manganese, and on current estimates of reserves of these minerals in developing States.

I. PROVISIONS IN THE CONVENTION

3. The minerals most likely to be produced from the Area in the future are polymetallic nodules, which contain various metals in different proportions. About two decades ago, polymetallic nodules could be characterised as a mineral occurrence, a mineral that was known to exist but with no medium-term prospects as to its exploitability since technology to recover these minerals was non-existent. Over a 20-year period several groups of commercially-oriented entities undertaking geological prospecting and research and development of mining and processing technology have moved polymetallic nodules from a mineral occurrence to a mineral resource, the term used for a mineral that is known to exist and that, with improvements in technology and/or economic conditions, can be expected to be mined in the medium-term future. The objective of the next phase, which will involve

further geological, technological and economic investigation, will be to characterize the nodules as a mineral reserve that can be worked under existing economic, political and social conditions. This phase is expected to require 5 to 10 years. Production will begin from the mineral reserve only after an investment decision has been made based on fairly reliable economic feasibility studies as to costs, revenues and profitability, and after the requisite lead-time of 4 to 8 years for constructing the commercial scale mining system and processing plant has elapsed. 1/

4. The current status of commercially-oriented activities and expected developments in geological, technical and economic factors indicates that three to five metals - copper, nickel, cobalt, possibly manganese and, with considerable lesser probability, molybdenum - may be extracted from the polymetallic nodules. 2/ Although production of these metals from nodules will occur well into the future, the participants in the deliberations of the Third United Nations Conference on the Law of the Sea and in fact, even before that, of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction were keenly aware that future production of those metals might have an impact on their market and land-based production. Consequently, the United Nations Convention on the Law of the Sea contains several key provisions intended to amerliorate the problems of land-based producers.

5. One of the most significant of these provisions is the production policies outlined in article 151. The formula contained in this article links production of polymetallic nodules to the estimated future growth in world nickel consumption; future production of nickel from nodules in any year is limited to a maximum of 60 per cent of the annual increase in future consumption except for an initial "build-up" period of five years when the maximum is 100 per cent of the annual increase. The formula is designed to allow mining of polymetallic nodules to begin and to integrate production of metals from nodules into the market without undue disruption. It should be added that the formula does not impose any limitation on land-based production. Since the ratio of the four metals - copper, nickel, cobalt and manganese - contained in polymetallic nodules are widely different from the ratio of these metals in world consumption, the maximum possible amounts of the four metals that can be extracted from the amount of nodules, allowable under article 151, will account for different proportions of world consumption of the respective metals. If it is assumed that the lower the proportion, the higher the degree of protection for land-based producers, and vice versa, preliminary estimates indicate that copper, nickel, cobalt and manganese are in a descending order in terms of degree of protection.

6. In recognition of this fact, among others, as well as keeping in view the protection of developing countries from adverse effects on their economies or on their export earnings resulting from a reduction in the price of an affected mineral, or in the volume of exports of that mineral to the extent that such reduction is caused by activities in the Area, the Convention includes provisions for the possible introduction of several additional measures. The relevant provisions are contained in articles 151, paragraphs 1 and 10, 4, paragraph 2 (a) to (d), 171 (f) and 173, paragraph 2 (c). Among the possible measures, the following are included: (a) commodity arrangements, (b) economic adjustment

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assistance and (c) a system of compensation, including the establishment of a compensation fund.

7. The work of Special Commission 1 has to be viewed against the backdrop of these provisions. While the overall area to be studied by the Special Commission and the objectives of the studies are specified in resolution I, paragraph 5 (i), the Special Commission may wish to construct a framework integrating several aspects of the overall area of investigation: (a) identification of developing land-based producer States, (b) investigation of the timing of production of minerals from the Area and the mechanism through which possible effects of the production of minerals from the Area would be felt, (c) measurement of these effects, (d) determination of the nature and extent of the problems and difficulties which would be encountered by the States concerned, (e) investigation of approaches that can be pursued in minimizing these difficulties, (f) study of the nature and modalities of economic adjustment assistance including co-operation with specialized agencies and other international organizations, (g) study on the establishment of a system of compensation, (h) study on the establishment of a compensation fund, its resource requirements and operation and, finally, (i) combining all of the above aspects into an integrated management system that would provide the Authority with timely information on the incidence of the difficulties and appropriate measures to mitigate them.

II. THE MINERAL MARKET MECHANISM

8. The mechanism through which the effects of production of minerals from any new source will be felt by the existing sources of production is the demand-supply-price determination mechanism in the world mineral markets. 3/ In theory, one can conceptualize two situations which would exist in the world mineral market, one without and the other with production from the new source, and then make a comparison of the outcomes in the two situations in order to assess the effects of the new source.

9. In the present case, a comparison needs to be carried out between the situation which would exist if no production from sea-bed occurred (base case), and the situation which would exist if production from the sea-bed occurred, consistent with article 151. In practice, however, several important issues need to be addressed and the Special Commission may wish to focus on them. These issues, pertinent to the world mineral market mechanism, have been discussed in document A/CONF.62/L.84. 4/ Some of the highlights of the analysis in that document are presented here.

10. First of all, there is evidence to suggest that in the case of the minerals concerned, an open market as well as a controlled market exist. The behaviour of the participants involved in establishing the supply and the demand functions in the controlled market can vary markedly from that in the open market. Controlled markets usually operate through international ownership ties, preferential trade relations and long-term contracts. One important area of analysis will be to investigate how the operations in the controlled market would change with supply from the sea-bed.

11. With regard to the open market, two significant areas are: the underlying market structure and the relationships characterizing supply and demand. Supply from sea-bed and from various sources on land will depend on the relative costs of production from those deposits and the extent of the deposits. The Special Commission may want to study when and to what extent supply from the sea-bed will be competitive with land-based sources on the basis of cost of production. However, one caveat is that considerations other than cost of production may be involved with regard to supply from the sea-bed as well as some supply from land-based sources. These considerations need to be carefully analysed.

12. The market conditions can be influenced by various factors other than production from the sea-bed. On the supply side, these factors include changes in relative costs of production from various land-based deposits and in the extent of these deposits, possible new sources of supply, e.g., polymetallic sulphides, cobalt-rich manganese crusts, polymetallic nodules in exclusive economic zones, newly-discovered high-grade deposits on land, changes in secondary supply from recycling, new technological development, etc. On the demand side, changes in the activity variable (e.g., income, industrial production, end-use), changes in prices of substitutes, new substitutes or new uses of the mineral concerned, are some of the relevant factors. Changes in government policies also can affect both the supply and the demand sides.

13. The effects of these factors need to be taken into account in isolating the effects of the specified factor of causality: production from the sea-bed. As an illustration, on the supply side, one can conceive of a situation where at a future time, "t", production from the sea-bed occurs but at the same time coincides with production from a newly-discovered deposit or unexpected cessation of production from an exhausted deposit. The outcome in the world mineral market will reflect the combined effects of both these factors, and the effects of production from the sea-bed need to be isolated from those of the latter factor. To give an illustration on the demand side, a situation may occur where production from the sea-bed coincides with an unforeseen recession or upswing in the world economy. There will be a need to isolate the effects of production from the sea-bed from those of the recession or upswing in the world mineral market.

III. POSSIBLE EFFECTS OF THE PRODUCTION FROM SEA-BED

14. Compared to the base case, with production from the sea-bed entering the mineral market, other things remaining the same, the price of the mineral and/or the volume of sales of land-based suppliers will fall, except in the following cases: (a) the demand for the mineral is infinitely elastic; (b) the entire supply from land-based sources is purchased at the base case price through predetermined contracts or arrangements; (c) the entire sea-bed supply is absorbed by 'new' consumers whose consumption is specifically created by the sea-bed supply itself; and (d) there is an increase in demand (shift upward of the demand curve) exactly equal to supply from the sea-bed specifically created by the availability of the mineral from the new source, e.g., new use of the mineral.

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15. The Special Commission may wish to investigate the possibilities of these cases occurring in practice. If there is a fall in price and/or volume the result will be a fall in sales revenues and, in so far as the sales are to foreign consumers, a fall in export earnings. This will mean a fall in the producer's returns. As a result, if there is a cut-back in production from the base case level or a shut-down of mines, the necessary income to meet the expenses generated by wages for labour, rent for land and interest on borrowed capital will also fall. A reduction in government revenues may also result.

16. The effects on the economy will be not only a reduction in factor income in the sector - local currency as well as foreign exchange - and in government revenues but also a reduction in the income of other sectors from which local inputs are consumed by the mineral sector: raw materials, infrastructure, wage goods, etc. This will mean a reduction in national income equal to the reduction in income in the sector itself plus the reduction in income of the sectors providing inputs used by the sector.

17. In time, several areas will be affected. Reduction in income in the sector will lead to reduction in income in the sectors from which the mineral sector consumes inputs; these latter sectors in turn will consume less inputs from other sectors and so on. This is the so-called multiplier effect which reduces national income by a multiple of the original amount of reduction. In so far as the mineral sector provides investment capital for other sectors, the growth of these sectors will be adversely affected. Reduction in foreign exchange earnings will reduce the ability to import essential goods and services, both for consumption and investment, and/or ability to service foreign debts.

IV. DIFFICULTIES OF DEVELOPING LAND-BASED PRODUCER STATES

18. The discussion has so far pertained to the effects of production from the sea-bed on land-based production. This provides a general framework within which the problems of developing land-based producer States can be focused on. To what extent the effects discussed above will be felt by a developing land-based producer State will depend on four crucial factors: (a) the level of production in the base case; (b) the extent of reduction in the value of sales; (c) the links and contributions of the mineral sector concerned to the economy of the State; and (d) the capabilities of the State itself in controlling the effects.

19. Production can be considered at different stages: mine production, metal production or production of the wrought form of metal. 5/ Production at any of these stages has relevance for the economy or the export earnings of the developing States.

20. Future production will be from the reserves; therefore, at this point of time, the Special Commission may wish to analyse the extent of reserves in various developing States. However, it should be borne in mind that the extent of reserves does not remain fixed over time - it may be augmented by further exploration efforts, improvements in technology and favourable economic conditions.

21. In this context, an additional consideration is the future time-period involved, since the longer the time-period, the higher the possibility of resources being converted to reserves. Furthermore, as has been mentioned earlier, polymetallic nodules are characterized as resources at this point of time and are expected to be converted to reserves in the future. In view of this, the Special Commission may wish to determine whether, viewed from the present, the extent of land-based resources rather than reserves would be an appropriate indicator to investigate. 6/

22. The repercussion of reduction in value of sales needs to be examined carefully. If a particular mineral sector experiences long-term lack of growth or reduced profitability, factors of production are usually diverted from that sector to other profitable sectors. Therefore the loss of factor income in the mineral sector is counterbalanced by income of these factors of production in alternative sectors. However, there are several caveats.

23. First of all, not all the factors of production which are employed in the mineral sector can be utilized in another sector; capital equipment in mining - plant and machinery - is an example. However, an important distinction should be made between capital equipment, the cost of which has already been fully recouped, and those the costs of which are yet to be recouped. Unrecouped capital and loss of returns to unrecouped capital - interest earnings on borrowed capital and profits, including rents from mineral deposit - need to be taken into account.

24. Secondly, it is not quite clear a priori whether factors of production diverted to alternative sectors will be producing more or less value added compared to the mineral sector.

25. Thirdly, even when factors of production can be diverted to alternative sectors, there may be a length of time required for the transition.

26. Finally, whether or not the alternative sectors can generate the same links and contributions to the economy of the mineral sector is a moot question.

27. The above considerations pertain to the issue of the optimum allocation of resources to various sectors. With respect to this issue there are two distinct schools of thought. 7/ One school, following the assumption that there are few investment opportunities in a developing economy, would pursue a "resource-based industrialization (RBI)" policy which envisages the mineral sector as a nucleus for economic development through provision of raw materials, capital, training, etc. for the creation of linkages to consumer goods, investment goods and service industries. This school also views the mineral sector as a major earner of foreign exchange and envisages the utilization of these foreign exchange earnings for imported raw materials and equipment which will form the basis for the growth of the economy. The other school, aware of the perils of dependence on a single sector, would seek new avenues of investment and aim for a more balanced economy.

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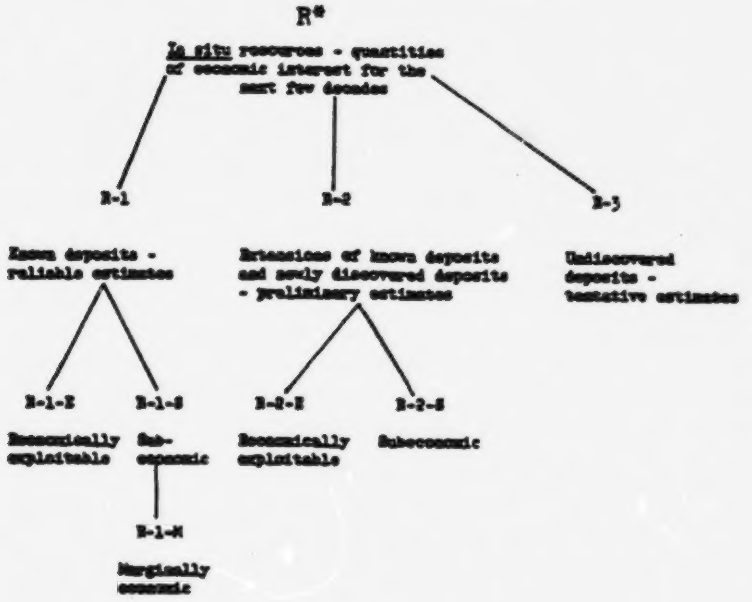
GRAPHICAL PRESENTATION OF CLASSIFICATION CATEGORIES


R*
In situ resources - quantities of economic interest for the next few decades
R-1
R-2
R-3
Known deposits - reliable estimates
Extensions of known deposits and newly discovered deposits - preliminary estimates
Undiscovered deposits - tentative estimates
R-1-E
R-1-S
R-2-E
R-2-S
Economically exploitable
Sub-economic
Economically exploitable
Subeconomic
R-1-M
Marginally economic

In the context of this paper, R-1-E and R-1 + R-2 may be relevant. Incidentally, these definitions conform to the discussion in document LOS/PCN/L.1 where, in essence, polymetallic nodules are characterized as R-2. It should also be noted that, in addition to the problem of definition, there are no uniform standards among various countries for measuring and statistical reporting of reserves and resources.

V. APPROACHES AND POSSIBLE MEASURES FOR MINIMIZING DIFFICULTIES

28. The preceding discussion on the difficulties that may be encountered by developing land-based producer States helps identify the approaches to be pursued in minimizing the difficulties. Basically, there are two approaches: general and sectoral. The general approach aims at minimizing the dependence of a developing State on a single resource sector. Diversification of the economy, structural adjustment, economic infrastructure building etc. fall within this category. The sectoral approach aims at counterbalancing the difficulties focusing on the mineral sector itself. This category includes commodity arrangements, supply-manangement schemes, promotion of downstream activities, promotion of markets, reduction of costs, compensation etc.

29. The general approach conforms, in theory, to one school of long-term development economics; however, its basic limitations pertain to the apparent lack of investment opportunities in developing States and the diffficulties of mobilizing investment funds. 8/ In spite of this, the experience of the World

Bank, the Regional Development Banks, the European Development Fund, and multilateral and bilaterial official development assistance is immensely valuable. The Special Commission may wish to recapitulate this experience. It may wish to focus on three particular areas.

30. In view of the fact that developing States often lack systematic information about investment opportunities, it may assist developing States in making an inventory of all potentially profitable investment opportunities - not merely commodity-related but any worthwhile investment opportunity that has income-, foreign exchange- and employment-generating potential comparable to those of the mineral sectors adversely affected.

31. Two existing schemes aimed at structural adjustment can be studied by the Commission: the structural adjustment loan facility of the World Bank and the structural adjustment assistance of the European Development Fund. In the case of the World Bank, the scheme differs from the usual World Bank loans in two respects: the loans are not tied to particular projects and they are designed to be concessionary, with structural adjustment of the economy as the criterion.

32. Improvement of market access by developing countries for any exportable good - not just commodity-related - can also be explored. The co-operation of the General Agreement on Tariffs and Trade (GATT) through its multilateral trade negotiation (MTN), or any other international organization can be sought in this connection. Expansion of markets in countries other than the traditional importers, e.g., centrally planned economies or middle income developing countries, can be explored.

33. In the sectoral approach, commodity arrangements are usually considered the best measures. In theory, suppliers and demanders of a commodity, e.g., a mineral, together manage both the supply and the demand sides in order to promote efficiency, stability and growth in the market at a price remunerative to the producers and fair to the consumers. In practice, however, it is very difficult to achieve agreements among the members of the two groups. In any case, the Special Commission may wish to study the experience of the relatively successful commodity arrangements, e.g., the International Tin Agreement. The Integrated Programme for Commodities (IPC) of the United Nations Conference on Trade and Development (UNCTAD) is another system under development on which the Special Commission can focus its attention. A commodity arrangement for cobalt, for example, which is aimed at stability of the long-term price of cobalt and security of long-term availability may be attractive to land-based producers, sea-bed producers and consumers. For example, a sharp decline in prace, which may result if the maximum allowable amount of cobalt enters the market, may critically reduce the profitability of a sea-bed venture and thereby the growth of the industry and ultimately the supply to consumers.

34. Short of a commodity arrangement, a supply management scheme for cobalt can be investigated. A supply management scheme differs from a commodity arrangement in that it takes demand as given and manages supply to match given demand. The production limitation formula in article 151 is an example. The provision contained in article 151, paragraph 7 regarding the levels of production of metals other than nickel can be carefully examined in order to determine whether a supply

management scheme can be formulated for cobalt. The incentive for such a scheme from the points of view of land-based and sea-bed producers and consumers are similar to those in the paragraph above.

35. With regard to downstream activities, the underlying assumption is that a loss of market in mineral ore can be counterbalanced by a gain in market for semi-processed or processed commodities. The major limitation in the case of sea-bed minerals, however, is that the producers of sea-bed mineral ores are also in a strong position to capture the markets for downstream commodities and since the demand for minerals is of a derived demand nature, the extent of the overall market is defined and the scope for a shift from one part of the market to another is limited. One existing scheme of relevance in this connection is the Second Account of the Common Fund under UNCTAD. The projects being studied under this scheme are commodity-related and aim at higher degrees of processing to be carried out in developing countries. Related efforts will be undertaken to improve market access of commodity-based products through trade agreements, either in the GATT forum or any new forum. 9/ Promotion of markets for commodity-based products, facilitating marketing and distribution by developing countries through improved market transparency, increased skills in contractual marketing, 10/ etc. are also envisaged.

36. In respect of counterbalancing the loss of markets, one particular area the Special Commission can examine is the potential of paticipation by adversely affected developing States in joint ventures with the Enterprise. As partners of the Enterprise, the developing States can bring in their expertise in land-based mining, some of which can be useful for sea-bed mining; at the same time, they can recoup some of the loss of exports.

37. With regard to the creation of new markets, the Special Commission may also explore the possibilities of promoting research and development (R & D) on new uses (new products or substitution for other materials) of the minerals, especially cobalt. This will increase the demand for the minerals which may offset some of the adverse effects.

38. If the problems of the developing land-based producer States are identified as cost-related, measures to improve productivity can be explored. Training of developing country nationals for improvement in management and technical skills can be envisaged. Research and development in improved technology can be promoted. Concurrently, the possibilities of acquiring machinery and equipment at lower cost or as grants can be explored. This will help save foreign exchange.

39. When studying a system of compensation, the critical issue the Special Commission has to deal with is what would be compensated for. Certain obvious facts can be gainfully recounted: (a) the more comprehensive the determination of the adverse effects that need to be compensated, the better for the recipients on one hand, and the higher the requirements for the contributors on the other; (b) in general, the lower the differential between the opportunity cost of cash and non-cash contributions and the returns to the contributors from compensation schemes, the greater the willingness of the contributors to contribute; thus other things remaining the same, loans at the market rate of interest, concessionary

loans and grants have a descending order of attractiveness to the contributors; (c) however, even if the differential is nil, the higher the level of required contribution, the greater the difficulty of attracting contributions.

40. The existing compensatory financing schemes, e.g., System for Minerals (SYSMIN) of the European Economic Community-African, Caribbean and Pacific States (EEC-ACP), the Compensatory Financing Facility (CFF) of the International Monetary Fund (IMF) and the First Account of Common Fund of UNCTAD are essentially for stabilization of prices or export earnings, eliminating the effects of short-term fluctuations. Thus, in theory, they operate like revolving funds, the outflows in low-price years balanced by inflows in high-price years. There are no existing international compensatory financing schemes for long-term loss of export earnings. The grant element will be necessarily high for this kind of scheme and thus this kind of scheme may run into difficulties regarding contribution.

41. It should be borne in mind that other sources of funds of the Authority, mentioned in article 171 - funds received from the financial terms of contracts, funds transferred from the Enterprise, funds borrowed pursuant to the regular borrowing power of the Authority and voluntary contributions - taken together will be available for three items of expenditure: (a) benefit-sharing, (b) Enterprise finances, and (c) compensation to developing land-based producer States. Particular attention has been given to the funds to be received from the financial terms of contracts; however, depending on what is to be compensated for, crude estimates of the amounts of these funds indicate that even if all of these funds are to be used to compensate developing land-based producer States, they may be grossly inadequate. The Special Commission may wish to carefully investigate this issue. It should be noted that with given amounts of funds, allocation of funds to one item of expenditure will necessarily affect amounts available for the other two items.

42. Three other sources of funds can be explored: a consumption levy on consumers of minerals at a price lower than the base price; a trade levy on the sea-bed producers which enjoy extra-marginal profits or guaranteed market access; and borrowing in the commercial capital market on the basis of paid-in capital in the form of contributions. In view of the jurisdictional problems, consumption levy and trade levy will require extraordinary co-operation from the Governments concerned.

VI. CONCLUDING REMARKS

43. Throughout this paper, suggestions have been made with the intention of facilitating the conduct of the work of Special Commission 1. A brief summary of these suggestions can indicate the tasks facing the Special Commission:

(a) the Special Commission can aim for agreed definitions of the terms used in the Convention and resolution I with a view to rendering them amenable to measurement, preferably quantitative; this will, at the same time, help define the scope of its work;

(b) it can establish a mechanism for having at its disposal the requisite data and information, both on land-based sources and on activities in the Area; the co-operation of the participating States can be sought in this regard;

(c) it can study the economic relationships among the mineral sector of developing States, their economies and the world mineral market, on a State-by-State basis;

(d) it can study the existing assistance/compensation systems with a view to investigating the possibilities of adaptation of these schemes for its purpose; in view of the uniqueness of the subject matter, it may have to devise innovative systems, some of which have been discussed above;

(e) it can study the establishment of a compensation fund, keeping in mind the resource needs of such a fund and the prospects of mobilizing the requisite resources.

There is, above all, a need for designing a management system capable of synthesizing all the data and information as well as the results of the studies and analyses of the Special Commission for the purpose of formulating necessary measures to ameliorate the problems of developing land-based producer States.

Notes

1/ For a detailed discussion of the status of the preproduction activities in respect of polymetallic nodules see document LOS/PCN/L.1.

2/ See United Nations, Ocean Economics and Technology Branch, Managese Nodules: Dimensions and Perspectives (Dordrecht, D. Reidel Publishing Company, 1979), chap. XIII. However, "manganese production strategy is more complex and indicates, from the business decision viewpoint, that manganese should only be produced if world demand cannot be met from terrestrial ores". Ibid., p. 158. See also J. C. Agarwal, "Kennecott process for recovery of copper, nickel, cobalt and molybdenum from ocean nodules", Mining Engineering vol. 31 (1979), pp. 1704-1707.

3/ The terms "supply", "production", on one side, and "demand", "consumption", on the other, are used frequently. It will be useful to have clear definitions of these terms. Production can be measured at the stage of the mineral, unwrought metal or wrought metal.

Supply = production ± changes in producers' stock + secondary supply (from scraps).

Consumption can also be measured at several stages: the first marketable form of the mineral (similar to mineral production on the production side), unwrought metal (similar to metal production on the production side) wrought metal (similar to wrought metal production on the production side) and end-use (when a mineral commodity is incorporated in a finished product).

Demand = consumption ± changes in consumers' stocks. For the purpose of this paper, production of minerals from the Area and production or supply from sea-bed are used synonymously.

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Notes (continued)

4/ For a detailed analysis of the mechanism, see United Nations, Department of International Economic and Social Affairs, The Impact of Sea-Bed Minerals on the World Economy: a Perspective Study, Report of the Expert Group Meeting on the Impact of Sea-Bed Minerals on the World Economy (in press).

5/ For the distinction among these terms see the Economic and Social Council, Committee on Natural Resources, "Standardization of definitions and terminology for mineral production and consumption," report of the Group of Experts on Standardization of Definitions and Terminology for Mineral Production and Consumption (E/C.7/1983/9). Mine production is defined as the production of the first marketable form of a mineral following its mining; metal production is defined as the production of the final unwrought (unworked) form of metal and production of the wrought form is defined as the fabrication of semi-manufactures.

6/ There are no clear-cut definitions of reserves and resources; however, attempts have been made for standardization of terminology for mineral resources. See ECOSOC, Committee on Natural Resources, "The international classification of mineral resources: report of the Group of Experts on Definitions and Terminology for Mineral Resources", document E/C.7/104. The following graphical presentation, reproduced from this source, may be helpful.

8/ See para. 27.

9/ In this connection, the Special Commission may wish to examine the provisions in articles 150 (j) and 151, para. 8 of the Convention related to market access and unfair economic practices.

10/ It should be noted, in this context, that in some cases removal of infrastructure bottlenecks, e.g., transportation to ports, can also facilitate marketing.

Annex*

Table 1. Copper mine production in developing States, 1980

	Mine production (in thousand metric tons)	Share in world production (in per cent)
Country		
Chile	1 067.9	13.9
Zambia	595.8	7.8
Zaire	459.4	6.0
Peru	366.8	4.8
Philippines	304.5	4.0
China	200.0	2.6
Mexico	175.4	2.3
Papua New Guinea	146.8	1.9
Yugoslavia	114.8	1.5
Indonesia	59.0	0.8
Mongolia	47.0	0.6
Namibia	39.2	0.5
India	27.6	0.4
Zimbabwe	27.0	0.4
Malaysia	27.0	0.4
Turkey	26.4	0.3
Botswana	15.6	0.2
Democratic People's Republic of Korea	15.0	0.2
Morocco	7.2	0.09
Cuba	3.3	0.04
Bolivia	1.9	0.02
Brazil	1.4	0.02
Congo	1.3	0.02
Ecuador	1.2	0.02
Taiwan	1.2	0.02
Iran (Islamic Republic of)	1.0	0.01
Guatemala	0.8	0.01
Republic of Korea	0.4	0.005
Honduras	0.3	0.004
Argentina	0.2	0.003
Algeria	0.2	0.003

/...

Table 1 (continued)

	Mine production (in thousand metric tons)	Share in world production (in per cent)
Country		
Mozambique	0.2	0.003
Burma	0.1	0.001
Colombia	0.1	0.001
WORLD TOTAL	7 663.3	

Source: United States Department of Interior, Bureau of Mines, Minerals Yearbook, 1982, vol. 1, p. 303.

* Definition, measurement and statistical reporting of production and reserves may not be uniform among countries. For further explanation of statistical reporting, refer to sources.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitation of its frontiers or boundaries.

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Table 2. Nickle mine production in developing States, 1980

	Mine production (in thousand metric tons)	Share in world production (in per cent)
Country		
New Caledonia	86.6	11.4
Philippines	47.1	6.2
Cuba	30.7	4.0
Indonesia	30.7	4.0
Dominican Republic	16.3	2.1
Botswana	15.4	2.0
Zimbabwe	15.1	2.0
China	10.9	1.4
Guatemala	6.9	0.9
Brazil	5.8	0.8
Yugoslavia	2.0	0.3
Morocco	0.1	0.01
Burma	0.01	0.001
WORLD TOTAL	758.5	

Source: United States Department of Interior, Bureau of Mines, Minerals Yearbook, 1982, vol. 1, p. 30.

/...

Table 3. Cobalt mine production in developing States, 1980

Country	Mine production (in metric tons)	Share in world production (in per cent)
Zaire	15 501	50.1
Zambia	4 399	14.2
Cuba	1 613	5.2
Philippines	1 331	4.3
Morocco	838	2.7
Botswana	226	0.7
New Caledonia	181	0.6
Zimbabwe	118	0.4
WORLD TOTAL	30 968	

Source: United States Department of Interior, Bureau of Mines, Minerals Yearbook, 1982, vol. 1, p. 256.

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Table 4. Manganese ore mine production in developing States, 1980

	Mine production (in thousand metric tons gross weight)	Share in world production (in per cent)
Country		
Brazil	2 281	8.7
Gabon	2 146	8.1
India	1 645	6.2
China	1 587	6.0
Mexico	447	1.7
Ghana	252	1.0
Morocco	132	0.5
Thailand	54	0.2
Turkey	42	0.2
Yugoslavia	30	0.1
Chile	28	0.1
Zaire	16	0.06
Indonesia	5	0.02
Philippines	3	0.01
Bolivia	1	0.003
Sudan	-	-
Republic of Korea	-	-
Pakistan	-	-
WORLD TOTAL	26 358	

- negligible.

Source: United States Department of Interior, Bureau of Mines, Minerals Yearbook, 1982, vol. 1, p. 587.

Table 5. Copper reserve base by country, 1980

	In million metric tons, copper content	Per cent of of world reserves
Country		
Chile	97	19
Zambia	34	7
Peru	32	6
Zaire	30	6
Philippines	18	4
Papua New Guinea	14	3
Others	n.m.	n.m.
WORLD TOTAL	505	

n.m. - not mentioned.

Source: United States Department of Interior, Bureau of Mines, Mineral Commodity Summaries 1982, p. 41.

Table 6. Nickel reserve base by country, 1980

	In million metric tons, nickel content	Per cent of of world reserves
Country		
New Caledonia	13.6	25
Cuba	3.1	6
Others	n.m.	n.m.
WORLD TOTAL	54.2	

n.m. - not mentioned.

Source: United States Department of Interior, Bureau of Mines, Mineral Commodity Summaries 1982, p. 105.

Table 7. Cobalt reserve base by country, 1980

	In thousand metric tons, Cobalt Content a/	Per cent of World Reserves
Country		
Zaire	1 180	38
Zambia	365	12
Philippines	180	6
New Caledonia	90	3
Morocco	45	1
Botswana	25	8
Others	n.m.	n.m.
WORLD TOTAL	3 085	

n.m. - not mentioned.

Source: United States Department of Interior, Bureau of Mines, Mineral Commodity Summaries 1982, p.37.

a/ Reserve figures were converted from short tons to metric tons and then rounded to the nearest five thousand tons.

Table 8. Manganese reserve base by country, 1980

	In million metric tons, gross weight a/	Per cent of world reserves
Country		
Gabon	145	3
Brazil	85	2
India	45	1
China	45	1
Others	n.m.	n.m.
WORLD TOTAL	4 900	

n. m. - not mentioned.

Source: United States Department of Interior, Bureau of Mines, Mineral Commodity Summaries 1982, p. 95.

a/ Reserve figures were converted from short tons to metric tons and then rounded to the nearest five million tons.

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LOS/PCN/SCN.1/WP.2
18 July 1984

ORIGINAL: ENGLISH

PREPARATORY COMMISSION FOR THE INTERNATIONAL
SEA-BED AUTHORITY AND THE INTERNATIONAL
TRIBUNAL FOR THE LAW OF THE SEA
Special Commission 1

BASIC DATA AND INFORMATION OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

Background paper by the Secretariat

CONTENTS

	Paragraphs	Page
INTRODUCTION	1 - 6	26
PART A		
I. MINERALS THAT MAY BE PRODUCED FROM THE INTERNATIONAL AREA .	7 - 8	27
II. PROFILES OF THE COPPER, NICKEL, COBALT AND MANGANESE INDUSTRIES	9 - 43	28
III. TYPES AND SOURCES OF REQUISITE STATISTICS	44 - 52	41

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INTRODUCTION

1. During the second session of the Preparatory Commission, Special Commission 1 on developing land-based producer States commenced its substantive work and carried out a general discussion of the topic it is mandated to study - the problems which would be encountered by developing land-based producer States likely to be most seriously affected by the production of minerals derived from the international Area, with a view to minimizing their difficulties and helping them to make the necessary economic adjustments, including studies on the establishment of a compensation fund. In the process of adopting a work programme and a detailed outline of the studies to be conducted by it, the Special Commission came to the conclusion that certain basic data and information are essential for its work. These data and information pertain to the minerals concerned, profiles of the existing industries for the metals that may be extracted from the minerals of the Area, world production, consumption, trade and price of these metals, developing land-based producer countries of these metals and existing international or multilateral economic measures which address similar problems. Accordingly, at the conclusion of the session, the Preparatory Commission, on behalf of Special Commission 1, requested the Secretariat to obtain such data and information available in the public domain and to transmit a note verbale to States to make available to the Secretariat, on a voluntary basis, any relevant data and information at their disposal (see LOS/PCN/SCN.1/1984/CRP.4 and Corr.1 and Add.1 and Add.1/Corr.1).

2. The present document, prepared in response to the above requests, is composed of three parts. Part A presents data and information about the minerals that may be produced from the Area, outlines industry profiles and discusses the issues of data requirements and data availability. Part B (LOS/PCN/SCN.1/WP.2/Add.1) presents statistics on world supply-demand-trade-price situation for the metals that may be extracted from these minerals and on developing land-based producer States of the metals concerned. Part C (LOS/PCN/SCN.1/WP.2/Add.2) contains information about existing international or multilateral economic measures which may be of relevance to the work of the Special Commission and also presents data and information received by the Secretariat from States in response to the note verbale.

3. In Part A, section I lists minerals that are known to occur in the international Area. Since the Special Commission has decided to concentrate, at this time, on polymetallic nodules, section I also presents a list of metallic and non-metallic elements contained in polymetallic nodules. Section II contains brief profiles of the copper, nickel, cobalt and manganese industries. These four metals are considered most likely to be extracted from polymetallic nodules and are the four metals on which the Special Commission has decided to focus its attention at this time. This section is an updated and somewhat modified version of annex III of the Third United Nations Conference on the Law of the Sea document A/CONF.62/L.84. Section III discusses the types of statistics the Special Commission may require in order to conduct effectively the studies entrusted to it. This section also discusses the issue of the availability of the required statistics at the current time from sources in the public domain.

4. Section I in part B presents data on world production, consumption, exports and imports of the four metals, by country for the most recent 10-year period for which such data are available. This section also presents data on the direction of trade for the five largest exporters and importers - to which countries and in what amounts the exports are made, and from which countries and in what amounts the imports are brought. Ten-year time-series data on prices of the four metals are also presented in this section. Section II presents a summary table listing the developing land-based producer States of the four metals. This section also presents data intended to demonstrate the importance of the four metals in the economies of developing land-based producer States - percentages of total exports or gross national product (GNP) of a particular State accounted for by any or all of the four metals. The annex to part B contains the note verbale sent to States and its accompanying questionnaire.

5. In part C, section I deals in brief with the existing international or multilateral economic measures which address somewhat similar problems to those to be studied by the Special Commission. The purpose, description, modality of operation, extent of assistance to developing countries, resource requirements and problems or difficulties, if any, encountered in the implementation of these measures are presented. The material for this section has been provided by the organizations under the aegis of which the measures are implemented. Tabular presentation of the statistics provided by States in response to the note verbale sent to them is contained in section II. The Secretariat expresses its appreciation for the co-operation of the organizations and the States concerned.

6. Special Commission 1, in its deliberations during the second session of the Preparatory Commission, and the Chairman of the Special Commission, in his report to the plenary, recognized that the collection, processing and dissemination of data and information is necessarily an ongoing activity. There is, therefore, a need for developing and maintaining a data base, specifically geared to the purpose of the Special Commission.

PART A

I. MINERALS THAT MAY BE PRODUCED FROM THE INTERNATIONAL AREA

7. Several types of minerals may be found in the international Area - the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction. Rona 1/ presents a list of minerals in the ocean basin, which include (a) polymetallic nodules, (b) manganese crusts, (c) polymetallic sulphides, (d) metalliferous sediments of volcanic origin, (e) nickel-platinium sulphides, (f) chromite, (g) oil and gas, and (h) geothermal energy. Out of these, the first three are known to occur in the Area. However, the number of sampling stations for manganese crusts and polymetallic sulphides are an order of magnitude less than that for manganese nodules. For example, by April 1984, there were only 50 stations sampled for polymetallic sulphides whereas as of March 1980, the Scripps Sediment Data Bank (which has later been transferred to, and is now being maintained by the United Nations) contained chemical analysis of nodules from 2,401 stations. 2/ The same Data Bank contained samples of manganese crusts from

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355 stations. One of the main reasons for interest in manganese crusts is that some samples show a relatively high cobalt content. However, in general, cobalt-rich manganese crusts and the major portion of whatever small number of stations that have been sampled for sulphides seem to be within the national jurisdiction (Exclusive Economic Zone (EEZ)). The sampling pattern in the international Area also has been different for manganese crusts and polymetallic sulphides from that for manganese nodules. In the case of the former two minerals, the pattern has been random and essentially for the purpose of scientific investigation. In the case of the latter, the pattern has moved from random to more systematic prospecting and exploration geared to commercial interest. Finally, almost nothing is known about research and development of technology for mining manganese crusts and polymetallic sulphides whereas in the case of the polymetallic nodules, pilot systems have been tested for mining, with varying degrees of success. Table A.I.1 summarizes the situation regarding these three minerals.

8. The above discussion, to a great extent, explains the reason why Special Commission 1 has decided to focus on polymetallic nodules at this time; however, the Special Commission also decided to keep in view the trends and developments with regard to manganese crusts and polymetallic sulphides. Polymetallic nodules contain about 55 metallic and non-metallic elements (see tables A.I.2 and A.I.3), out of which copper, nickel, cobalt and manganese are of economic interest. Mention has been made in the literature about extracting molybdenum, vanadium, titanium and zinc; however, very little is known about the economics of producing these metals from polymetallic nodules. Therefore, Special Commission 1 decided to concentrate on the former four metals, although it will keep in view the trends and developments with respect to any other metals or non-metallic products from polymetallic nodules.

II. PROFILES OF THE COPPER, NICKEL, COBALT AND MANGANESE INDUSTRIES

Copper

9. Copper was the first industrial metal used by mankind and today the consumption of copper is only exceeded in metal usage by iron and aluminium. World consumption of refined copper in 1982 was 9.1 million metric tons (table B.I.2.1 in LOS/PCN/SCN.1/WP.2/Add.1).

10. World mine production (new production) of copper in 1982 was an estimated 8 million metric tons. 3/ The difference between new production and consumption is accounted for mostly by recycled metal (scrap copper); it is generally believed that recycled copper supplies a considerable share of copper consumption. This is an important factor in the industry since demand for new copper can be influenced by the supply of recycled copper. Supply of recycled copper is determined by the amount of copper used in the end-products from which copper can be recovered and their average life.

Table A.I.1. Minerals that occur in the Area

Mineral	Number of stations	Contained metals/ elements	Remarks
Polymetallic nodules	2,401 a/	See tables A.I.2 and A.I.3	Commercial interest relatively high. Geological exploration and technology development relatively at an advanced stage.
Manganese crusts	355 a/	See tables A.I.2 and A.I.3	Very little known about geological exploration and technology development. Some samples relatively rich in cobalt. However, high-cobalt samples generally occur in EEZ.
Polymetallic sulphides	50 b/	Zinc, copper, silver, cobalt, lead, cadmium, manganese, calcium, potassium, iron, molybdenum, tin, vanadium	Very little known about geological exploration and technology development. Occur both in EEZ and the Area, but known samples are generally in EEZ.

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a/ As of March 1980; chemical analysis.

b/ As of April 1984; number of samples for which chemical analysis was done not known.

Table A.I.2. Metal contents in polymetallic nodules

(Percentage)

		WORLD			
		No. of stations	Mean	Range	Standard deviation
Mn	MANGANESE	2 378	18.60	0.04-50.3	7.20
Fe	IRON	2 374	12.47	.30-50.0	5.69
Ni	NICKEL	2 383	.66	.01-1.95	.44
Cu	COPPER	2 368	.45	.01-1.90	.40
Ni + Cu	NICKEL + COPPER	2 366	1.12	.02-3.44	.81
Co	COBALT	2 284	.27	.01-2.23	.19

Source: V. E. McKelvey et al., Analysis of the World Distribution of Metal-Rich Subsea Manganese Nodules (United States Department of the Interior, Geological Survey, Alexandria, Virginia, 1983 (USGS Circular 886)), p. 2.

Table A.I.3. Other metals/elements in polymetallic nodules

		WORLD			
		No. of stations	Mean (per cent)	Range (per cent)	Standard deviation
Li	LITHIUM	19	0.010	0.00-0.060	0.014
Be	BERYLLIUM	40	.001	.00-.010	.002
B	BORON	86	.029	.002-.090	.018
C	CARBON	75	.327	.033-1.50	.315
F	FLUORINE	2	3.00	3.00-3.00	0
Na	SODIUM	410	1.97	.30-6.55	.82
Mg	MAGNESIUM	531	1.57	.02-5.39	.63
Al	ALUMINIUM	592	2.70	.11-8.00	1.30
Si	SILICON	509	7.69	.24-28.80	4.12
P	PHOSPHORUS	321	.37	.02-6.03	.77
S	SULFUR	106	.51	.05-3.50	.71
Cl	CHLORINE	13	.83	.28-1.01	.17
K	POTASSIUM	490	.73	.11-3.70	.45
Ca	SCANDIUM	1 083	2.23	.02-28.73	2.54
Sc	SELENIUM	76	.005	.00-0.269	.031

Table A.I.3 (continued)

		WORLD			
		No. of stations	Mean (per cent)	Range (per cent)	Standard deviation
Ti	TITANIUM	900	.69	.01-8.90	.47
V	VANADIUM	437	.052	.001-.500	.033
Cr	CHROMIUM	274	.007	.000-.231	.024
Zn	ZINC	1 363	.12	.01-9.00	.41
Ga	GALLIUM	57	.001	.000-.000	.001
Ge	GERMANIUM	5	.004	.000-.007	.004
As	ARSENIC	63	.014	.002-.048	.009
Rb	RUBIDIUM	32	.002	.000-.006	.001
Sr	STRONTIUM	369	.085	.001-.285	.042
Y	YTTRIUM	134	.015	.002-.095	.013
Zr	ZIRCONIUM	289	.057	.002-.360	.038
Nb	NIOBIUM	68	.007	.001-.030	.005
Mo	MOLYBDENUM	836	.038	.002-.220	.022
Ag	SILVER	7	.001	.000-.002	.001
Cd	CADMIUM	129	.001	.000-.003	.001
Sn	TIN	141	.008	.000-.040	.008
Sb	ANTIMONY	10	.005	.004-.005	.000
Te	TELLURIUM	17	.022	.017-.027	.003
I	IODINE	1	.250	-	-
Ba	BARIUM	463	.23	.000-2.14	.21
La	LANTHANUM	75	.021	.009-.070	.012
Ce	CERIUM	72	.072	.009-.300	.059
Nd	NEODYMIUM	37	.026	.007-.070	.014
Sm	SAMARIUM	38	.004	.002-.011	.002
Eu	EUROPIUM	38	.001	.000-.002	.000
Tb	TERBIUM	36	.001	.000-.002	.000
Yb	YTTERBIUM	101	.003	.001-.010	.001
Lu	LUTETIUM	32	.000	.000-.001	.000
Hf	HAFNIUM	8	.001	.000-.001	.000
Ta	TANTALUM	9	.002	.000-.002	.001
W	TUNGSTEN	22	.010	.003-.060	.011
Hg	MERCURY	1	.000	-	-
Tl	THALLIUM	130	.016	.000-.061	.010
Pb	LEAD	1 246	.093	.01-.75	.067
Bi	BISMUTH	41	.002	.000-.009	.002
Th	THORIUM	121	.003	.000-.013	.002

Source: V. E. McKelvey et al., op. cit., p. 34.

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11. The electrical and electronic industries are the principal users of copper and account for over 50 per cent of the demand. The remainder goes into construction, machinery, transportation and other miscellaneous industries and a certain amount (less than 10 per cent) goes into chemical and other non-recoverable products. The substitution by aluminium and optical fibre in the electrical and electronic industries and by stainless steel and plastics in other products has reduced the expansion potential for copper. On the other hand, the developing countries still have a per capita energy usage of less than half of that in the industrialized countries and, since end-use in the energy sector is an important determinant of the demand for copper, the demand within the developing countries will increase as their internal development progresses. This is demonstrated by the fact that, while the demand for copper in the western world has shown an average rate of increase in the order of 3.3 per cent for some years now, that in the developing countries has been around 7 per cent. The overall world consumption of copper has shown an average increase of 3.8 per cent per year over the last 30 years but the index of copper consumption per unit of industrial production has been falling. As for future demand, one source estimates a probable average annual growth rate of 2.5 per cent for world copper demand for the period 1981-2000. 4/

12. The occurrence of copper mineralization and the principal production centres are geographically widespread. There are 59 copper producing countries reported in the United Nations sources (table B.I.1.1 in LOS/PCN/SCN.1/WP.2/Add.1) but of these, 16 are responsible for about 90 per cent of world production. The predominant fact in the trading pattern is that the two largest consumers of copper (United States and USSR) are also the major producers and largely self-sufficient in supply, whereas the other two major industrialized groups (European Economic Community and Japan) are almost entirely dependent on imported copper. Demand of the latter two groups and also the shortfall in other industrialized countries is met only in part by imports from Canada, Australia and South Africa but mainly from several developing countries: Chile and Peru in the American region, Zambia and Zaire in Africa and the Philippines and Papua New Guinea in the Pacific region. The United Nations Conference on Trade and Development (UNCTAD) statistics of international trade 5/ show that, of the world copper imports in 1981, valued at 9,251.3 million US dollars, only 820.6 million represented imports into the United States and 58.8 million were imports into the Union of Soviet Socialist Republics but imports into the EEC countries were 3,857.4 million and into Japan were 2,287.7 million. Of the world copper exports in 1981, valued at 8,385.6 million US dollars, 4,977.9 million were from the developing countries.

13. Copper is sold usually through annual or long-term contracts though a certain amount is transacted as immediate sales. The long-term contracts are often a part of an agreement whereby the consumer had participated in the original financing of the mining project. However, export contracts are more often related to the prices quoted on the London Metal Exchange which is an open market. Pricing in the United States has been mainly based on scales set by the domestic producers and aligned to the supply-demand situation and their production costs. Since 1978, however, there has been a trend towards the use of the open market prices of the New York Commodity Exchange (COMEX). These pricing systems have been subject to much criticism but they have been defended on the grounds that the price in the United States is competitive among a number of producers, and the London Metal Exchange

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price, although only a limited amount of actual metal is sold on the Exchange, does represent the marginal price and the immediate supply-demand situation. It is a very sophisticated system by which forward dealing is intended to allow both buyers and sellers to insure against sudden price changes. However, factors such as interest rates and currency exchange rates and, undoubtedly, speculative dealing assume very significant roles in price formation. This has led to anomalous situations: for example, recently low prices prevailed at a time when supply and demand were evenly balanced but hardened later even though an excess of supply threatened the market. These situations and the general volatility of the market prices have been some of the major problems facing both producers and consumers in the copper industry. Although efforts have been made to establish some stability in the pricing, including discussions in the UNCTAD's Integrated Programme for Commodities (IPC), they have not as yet been successful. However, with the need to attract the increasingly massive amounts of capital to sustain the mineral industry, no doubt, efforts will continue to be made to find more efficient and stable pricing mechanisms.

14. Since 1979, there has been a distinct drop in consumption; mine production has also fallen, though to a lesser extent. At the same time, copper prices have been falling and, in 1982, were the lowest in real terms since the Second World War.

15. Copper is produced in many different countries and under many different conditions and types of management control. For instance, the grade of ore being worked varies from deposits containing well below 1 per cent of copper to some which may exceed 3 per cent; the operations could be relatively low-cost open pits or expensive deep-level underground mines. The mines themselves are now, in many cases, controlled by large industrial groups and oil companies, and 50 per cent of copper produced at present comes from State and government controlled mines. It is inevitable that these different groups will have different investment and production policies and objectives; some will be prepared to restrict production during falling demand while others will not be able to respond to market conditions alone. These and many other variables, some of which may be extra-economic, make it impossible to estimate a price which would, theoretically, bring ex ante supply and demand into equilibrium. A complicating factor is that copper is often a co-product and is produced from the same ore with other metals such as cobalt, molybdenum, gold, silver, lead, zinc, nickel, and though for purely accounting purposes, a separate cost of production may be calculated for each metal on a notional basis, the only real cost is that of the project as a whole. Unless the revenues from the other metals are carefully considered, one can reach erroneous conclusions about the cost of production of copper.

16. World reserves of copper are estimated now to be in the range of 300-500 million tons of metal exclusive of the sea-bed resources. This is a figure which is constantly changing as new discoveries are made and advances in mining and metallurgical technology enable tonnages which are now considered only as resources to be classified as viable ore reserves. World reserves have, in fact, increased since 1950 at a rate of 7.5 per cent while mine production has only increased at 3.75 per cent over the same period. It is estimated that there are 270 copper prospects with a metal reserve of 200 million tons of copper in various places around the world awaiting development. Of the known reserves, approximatively

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32 per cent are in the developed countries, 56 per cent in developing countries and 12 per cent in the Eastern bloc countries. Together they represent an assured supply for over 60 years with additional identified resources able to meet demand for up to 150 years.

17. In view of the many imponderables involved, it would be very difficult to predict the future of the copper industry with any degree of confidence. However, some studies have indicated that to develop a new copper mining project would cost in the order of $12,000 per annual ton of copper produced (an estimate borne out by the Cuajone project in Peru which cost $12,200). To obtain the recovery of this capital within 15 years and an interest of 10 per cent would require a revenue of 70 cents per pound irrespective of operating costs. This would seem to bear out the estimates given by some authorities that, in the absence of revenues from a profitable co-product, it is unlikely that a big new copper project will be developed unless an economic price of $1.15 to $1.45 can be expected. This will leave the future increase in demand to be satisfied from the present unused capacity of the industry and expansion of existing mines which could be accomplished at a lower capital cost than a completely new project.

Nickel

18. Though identified as a metal as long ago as 1751, nickel does not seem to have been produced on a commercial scale until extensive deposits were located in New Caledonia in 1860. However, it was the discovery of the sulphide deposits in Canada in the 1880s and the development of an effective copper-nickel separation process that enabled nickel to reach its present level as an industrial metal.

19. World consumption of nickel for 1982 was approximatively 630,000 metric tons (table B.I.2.2 in LOS/PCN/SCN.1/WP.2/Add.1). For the 25 years prior to 1970, the rate of increase in consumption has been over 6 per cent, but consumption has slowed down in recent years and has, in fact, shown a decline for the past three successive years.

20. The main uses for nickel are in stainless steel (approximately 30 per cent) and in other alloy steels (approximately 40 per cent). Consumption of these steels has been increasing at a rate of 3 per cent per annum since 1973 but there has been a considerable drop in the demand in the United States with a consequent reduction in the demand for nickel in this sector (United States consumption of nickel for stainless and other alloy steels and cast iron in 1980/81 was 112,000 tons but in 1982 was 70,000 tons). Recent estimates have, however, indicated an increase in demand for these products in the United States so the downward trend in overall nickel consumption may have been arrested or reversed. A factor which must be taken into account in estimating consumption is the high usage of scrap metal; an estimate of the stainless steel sector on a world-wide basis has put the ratio of new metal to scrap at nearly 1:1. The average life of stainless steel products is about 20 years so the high increase in consumption of the 1960s may be expected to have an increasingly adverse effect on current demand for new metal. Research is going on continuously to improve the nickel alloys and to expand the usage of nickel (car batteries, nickel plating of cans, etc.) but at the same time research continues to seek non-nickel bearing stainless steels (aluminium, manganese) and it

would be difficult to discern any overall effect in consumption due to these factors at this time. Some experts, however, believe that nickel usage in the steel industry may have been adversely affected on a long-term basis.

21. The demand for nickel is closely linked with the development of capital goods industry through the usage of stainless and alloy steels. Recession or low rate of growth of the world economy strongly influences the demand for nickel.

22. Nickel ore deposits are geographically widespread, occurring mainly as sulphide minerals and as oxidized material known as laterites. The laterites are the result of enrichment from surface weathering and are found mostly in tropical areas or where tropical conditions have existed. These projects are worked as open pit surface operations. The sulphide ore bodies are deep-seated and more often, though not always, worked as underground mines. The principal known commercial sulphide ore-bodies are in Canada, the USSR, Australia, Zimbabwe, Botswana, Finland and South Africa though sulphide mineralization has been reported in other areas. The laterite deposits are more widespread in occurrence and are being worked in New Caledonia, Cuba, the Dominican Republic, Colombia, Guatemala, the Philippines, Indonesia and Australia.

23. The difference between the two types of ore, from the industry point of view, is the relative cost of mining and metal recovery. On the average, the laterite deposits have a grade (metal content) comparable with that of sulphide deposits, but since they are worked by surface open pits rather than underground mines, the mining costs tend to be lower. However, this is more than offset by the much higher energy requirements in the complex metal recovery process from the laterites compared with that from the sulphide ores (two to three times as much) and, as a generalization, it can be said that the cost of production from laterites will be higher than from sulphide ores.

24. The nickel market has for many years been dominated by the major producers who had established the price for the metal. Since the mid-1970s, when only about 10 per cent of supply was sold on the open market, the supply base has broadened considerably and in 1982, over 40 per cent of the supply was sold on the open exchange, and the open market price is increasingly being used as basis for contract negotiation. Producer prices are still quoted but they often include discounts and do not represent real sales prices (for example, at the end of April 1984, when producer prices were $3.20 per pound, open market prices were $2.17 to $2.37). The price of nickel fairly closely reflects the world economic growth in the capital goods sector and the supply situation but, like copper, the markets in recent years have been increasingly influenced by changing exchange rates and interest rates. Because of the diverse conditions of the industry, it would be difficult to estimate an economic price for nickel. However, it is interesting to note that one of the major producers (INCO) estimated that it would cost $9 to $11 per annual pound of nickel to establish a new project. Interest at 12 per cent and recovery of this capital over 10 years would alone require a price of $1.77 per pound irrespective of operating costs.

25. The estimated land-based world reserves of nickel are in the range of 55-65 million tons of nickel of which 30 per cent are in sulphide deposits and

70 per cent are in laterite deposits. There are, in addition, some 125 million tons characterized as resources and of this, 18 per cent are sulphides and 82 per cent are laterites. 6/ At the present rate of consumption, the reserves are sufficient for 75 years' consumption and the resources would provide for a considerable period beyond that.

26. The pattern for the future of the nickel industry will depend on the possibility of further discoveries of sulphide deposits of a grade comparable with those now being worked, and improved recovery technologies in the existing laterite operations. It should be noted that over 70 per cent of the reserves and resources are in laterite deposits whereas only about 40 per cent of present production comes from laterite deposits and over 60 per cent from sulphides. It is obvious that the future supply of nickel must become less dependent on sulphide deposits. A new factor will enter into the nickel industry with the advent of production from the sea-bed. At this time, the estimates of the cost of production of nickel from sea-bed nodules are far from precise and are of an order-of-magnitude nature. Weight of opinion would, however, suggest that the cost may be somewhere between that from sulphide ores and from laterites. In the long term, the ore reserve position indicates that the more abundant laterites and sea-bed resources will have to supply an increasing share of the market. Which of these two sources is likely to be the main additional supplier, the laterites in which many developing countries have an interest, or the sea-bed resources which will probably be mainly financed from the industrialized countries, will depend on several factors including the comparative costs.

27. Whatever the long-term scenario may be, the dominating factor in the immediate and foreseeable future of the industry is that it is, at present, operating considerably under its capacity. The capacity of the industry is a complex equation based on mine capacity, smelter capacity, refinery capacity and other factors including increasingly stringent environmental regulations, and it would be extremely difficult to make an accurate assessment of the actual world productive capacity. However, during the last two years, several major plant closures have occurred and others have gone onto reduced production (mainly laterite projects) because of the market situation or technical problems. It has been estimated that in 1982, only 55 per cent of the Western world capacity was being utilized (an optimum utilization would be about 85 per cent) and one study has concluded that existing projects could readily expand to fill the demand for nickel to the end of the century. 7/

Cobalt

28. Cobalt has advanced from being considered at one time, an objectionable contaminant in the recovery process of copper and nickel to become one of the important industrial metals. It has a number of specialized usages such as in heat- and corrosion-resistant steels, in tool steels and for hard facing wear-resistant material for drilling equipment, in the manufacture of permanent magnets and in the chemical and ceramic industries. The shortage of supplies from Zaire during 1979 and the considerable increase in price in 1979 and 1980 has led to a strong trend towards substitution of cobalt by ceramics in permanent magnets and by nickel, vanadium, tungsten and chromium in heat-resistant and other types of steel, and it seems that some of the markets will be irretrievably lost.

29. Reliable statistics on production and consumption of cobalt are difficult to obtain and are imprecise. In some cases, the actual metal produced or consumed is reported whereas in others, the cobalt content of the material (ore or concentrate or smelter matte) is reported (it should be noted that the actual recovery of cobalt metal from this material can vary considerably). Cobalt occurs in several different mineral forms, occasionally on its own but usually in association with copper and nickel ores. The amount of cobalt in these minerals is small, varying from less than 0.1 per cent up to more than 0.5 per cent, and the physical and chemical association with the other metals is very close; this makes the separation process complex and costly. Cobalt is considered a co-product or by-product with processing plants primarily designed to obtain the highest possible recovery of the main metals, copper and nickel. Given this objective, it is not always economically sound or even technically practicable to aim for an equally high recovery of the cobalt. It would be impossible to obtain reliable statistical information on the matter of the overall metallurgical recovery of cobalt but, as an estimate, it can be said that, of all the copper-cobalt and nickel-cobalt ore presently being treated, 90 per cent of the copper and the nickel reaches the market but much less than 50 per cent of the cobalt.

30. The factors which, in the short term, control the amount of cobalt that is produced are the type of copper-cobalt and nickel-cobalt processing plants in use and the capacity of the cobalt recovery section of the plant. Only up to a point would it be correct to say that the amount of cobalt produced is dependent on the total tonnage throughput and related to the amount of copper and nickel produced. Beyond that point, it is a matter of cobalt plant capacity and is not a direct function of the amount of the other metal produced. In other words, an increase or decrease in copper and nickel production may not necessarily indicate similar changes in cobalt production. Some mines which, in fact, are working an ore with cobalt as a subsidiary mineral, have no cobalt recovery plant, and cobalt is discarded in the reject from the concentrating plant (tailings) or, mainly, in the slag from the smelting process.

31. Cobalt is usually sold as a metal, though exports from a producing country may take the form of a cobalt matte or may be in a copper or nickel concentrate for recovery and refining elsewhere. The price has been controlled until recently by the major supplier from Zaire but a wider supply base has been developing and more cobalt, even some from Zaire, is being sold at open market prices or at a discount from the quoted producer price. Price had shown a fairly consistent pattern, ranging between $1.50 and $4.50 per pound for a number of years until the disruption of supplies from Zaire in 1978 which pushed the price, during a period in 1979, to $50 per pound. The effect of this increase, together with that of the economic recession, was a fall in demand and a collapse in price from $17.50 in 1981 to as low as $3.75 per pound at some point in 1982 which is stated to have been the lowest price in real terms in history. This now appears to have been an over-reaction, and the open market price has risen to $11 to $12 per pound: an illustration of the instability of the market.

32. Available statistics indicate that world production of cobalt has fallen from a high of 31,000 tons in 1980 to the order of 20,000 to 25,000 tons in 1982. However, because of the economic recession and the trend to substitution mentioned

before, the world consumption took a more pronounced fall from a high of 24,000 tons in 1979 to an estimated consumption of 15,500 tons in 1981 and evidence suggests that the downward trend continued in 1982. An illustration of this declining consumption is that of the United States which was 7,900 tons in 1979 falling to 6,760 tons in 1980, to 5,130 tons in 1981 and 4,300 tons in 1982. It is probable that a producers' stockpile of material has built up over this period and further cuts in production have been made though this is partly due to the decline in nickel production with which cobalt is a co-product. From recent market and price indications, it would seem that these cuts in production may have been overdone and both demand and price have been increasing.

33. The world land-based reserves of cobalt in identified occurrences are estimated to be in the order of 3.4 to 5 million tons of cobalt metal. The land-based reserves are considered adequate to supply the world demand for well over 100 years. Cobalt is contained mainly in the copper ores in Zaire and Zambia, in the nickel sulphide ores in Canada and Australia and in the very extensive nickel laterite ores in various parts of the world. These figures must be viewed as very approximate estimates and are probably low because many cobalt-bearing copper and nickel ore bodies were not accurately sampled for cobalt, nor is the estimated cobalt content recorded as reserves. Also, the cobalt content of many large cobalt-bearing tailings disposal areas (waste dumps) and smelter dumps at operating copper and nickel mines is unrecorded.

34. The economics of cobalt processing can shed some light on the comparative position of land-based and sea-bed resources. To classify cobalt merely as a by-product of the land-based production of copper and nickel could lead to erroneous conclusions. Certainly a cobalt-bearing material emerges from the copper and nickel recovery plants but further processing to a saleable cobalt product entails an additional highly capital-intensive cobalt recovery plan. A decision has to be made by the project developer whether the demand and price for cobalt justifies this extra cost plus the use of a processing method which might entail a lower recovery of the main metals. The costing structure of these multi-product industries, on which the decision would be based is complicated and it is not possible in this paper to go deeply into the matter. However, one fact is quite apparent, that in assessing the viability of cobalt production, the current operating costs will not be as significant in the total costs as the interest on and recovery of the original capital costs. Therefore, in estimating the relative competitive position of the various land-based producers and sea-bed producers, it is clear that those land-based producers which have financially written off their cobalt plants by the time sea-bed production starts will have a distinct cost advantage over the sea-bed producers, particularly in the early years when the capital costs of the sea-bed projects are being recovered. Also, taking into account the fact that the revenue from cobalt sales could be more significant in the overall cash situation for sea-bed mining projects than for land-based projects (with the possible exception of Zaire), it will be greatly in the interest of the sea-bed mining industry to establish a fair and stable marketing system for cobalt.

Manganese

35. Manganese has been used since ancient times as a pigment in glass and in ceramics but it was the rapid advance in the technology of steel making during the

nineteenth century which developed the present demand. Approximately 97 per cent of manganese now being used goes into the steel industry, both as a processing agent (a scavenger to remove the unwanted oxygen and sulphur from the iron ore) and for alloying to make an impact- and wear-resistant steel (steel bearing 10 to 14 per cent manganese). There are no practical substitutes for these purposes and manganese is considered as an essential metal in industrialized countries where steel making is an important part of the economy; the strategic importance of manganese is also apparent. It is also used as an alloy with other metals such as copper and aluminium to add to steel to give it corrosion-resistant properties and could, in this field, substitute for nickel, and it is also used to make an industrial bronze. In other areas, it is used in the manufacture of dry cell electric batteries and in the chemical industry in various ways such as glass making, food processing and generally as an oxidizing agent.

36. World production of manganese ore in 1982 was an estimated 22.5 million metric tons. Saleable manganese ore contains from 35 to 55 per cent manganese with a normal standard set at 48 per cent so the manganese content of the 1982 production would be in the order of 10 million metric tons. These figures must be taken with reservation because an unrecorded amount of manganiferous iron ore (with too low a manganese content to be classified as manganese ore) is being fed directly into iron blast furnaces. The consumption of manganese is closely linked to that of iron and steel. The existing quantitative relationship between the consumption of manganese and the production of iron and steel will, however, be changing as new steel making processes evolve, including the wider use of electric furnaces which will require less manganese. There has already been a reduction of 5 per cent in some processes and up to 20 per cent in others with the result that the overall consumption of 6.6 kilograms of manganese per ton of steel has dropped to 6.1 kilograms and some contend that this may fall to 4.4 kilograms by 1990. This reduced demand from the steel industry will, however, be offset to some extent by an increasing use of manganese alloys, corrosion-resistant steel etc., and because of the comparative low cost of manganese, research in this area will continue.

37. The pricing and selling of manganese products are usually carried out through negotiated contracts but the prices are quoted in metal trade journals and constitute bases for such negotiation; it is, therefore, to some extent an open market. Prices can vary according to freight rates, overall grade and content of certain impurities such as phosphorus. On the whole, however, the prices for manganese ore have been relatively stable.

38. Manganese is usually recovered as an oxide ore and it is classified as a commercial ore if the manganese content exceeds 35 per cent. However, most ores are beneficiated in some way to obtain a more commercially acceptable product containing 48 to 55 per cent manganese. Chemical and battery grade manganese is of a higher quality and is usually selectively mined from certain areas of an ore-body or is produced synthetically from lower grade ores.

39. The steel industry is using less manganese ore as direct feed to the furnaces and finds it more convenient to use an intermediate product which is a high manganese iron alloy (ferro-manganese containing about 80 per cent manganese, carbon and iron, and silico-manganese containing about 70 per cent manganese,

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silicon and iron). The production of these manganese alloys has been a part of the steel industry but in recent years there has been a move to integrate the production of these alloys with the ore production; consequently, there is an increasing export trade in ferro-manganese and silico-manganese and less trade in ore. Significant economic factors in the manganese alloy industry is that it is high in energy consumption and also gives rise to pollution problems. (For example, in the United States which now imports 80 per cent of its ferro-manganese, it is estimated that environmental regulations have added 20 per cent to the capital costs and 10 per cent to the operating costs of a plant.)

40. Geographically, manganese, like most minerals in occurrence, is quite widespread but the number of areas where the ore can be exploited as a viable operation are limited. Though 33 countries are listed as producers of manganese in recent years, 8 of these countries (Australia, Brazil, China, Gabon, India, Mexico, South Africa and USSR) were responsible for about 97 per cent of production. The ore reserve situation is even more narrowly based in that, of the present measured reserves of some 325 million metric tons of recoverable manganese, 97 per cent is located in the USSR, South Africa, Gabon and Australia. Studies have inferred possible additional tonnages (though some are low grade) in Mexico, Brazil, China, India and Turkey but the general situation is unlikely to change in the near future since there have been no new proven deposits which would be exploitable under present economic conditions in recent years. The known and proven reserves give an assured supply of manganese well into the next century and the inferred resources could be adequate for 100 years. However, the supply pattern is expected to change and move more towards the areas of the large reserves. At the same time, the USSR may be exporting less to the Western countries and more to the Eastern bloc. With this further narrowing of the supply base, it is clear that the consumers are concerned that their ability to assure themselves of guaranteed and uninterrupted supplies of this essential metal will be limited.

41. The practical possibilities and the economic viability of the production of manganese from the sea-bed and the effect that it may have on land-based production are matters which have had less exposure in publications and discussion than most of the other matters concerned with sea-bed mining. The additional reserves which could be available from sea-bed resources are, at present, inestimable. To get a perspective of the possible production situation, it should be noted that the average manganese content of the nodules which are likely to be exploited first is between 25 and 29 per cent. Therefore, theoretically, manganese from one sea-bed operation treating 3 million tons of nodules per year could be some 800,000 tons or over 8 per cent of world consumption. Experts, however, agree that these figures have little relationship with the realities of the situation and the possibilities of production of manganese and the quantities will be decided by other factors than the manganese content of the nodules. These factors are the technical problems of producing a saleable product and whether it can compete in price with the land-based material. The high strategic importance of the metal will also, undoubtedly, influence the decisions.

42. Some of the groups involved in planning sea-bed mining projects have stated that the cost of setting up and operating a plant to produce manganese would not be competitive in world markets. Other views, however, have been expressed and no

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doubt the matter will be subject of further study before any project is actually developed. Facts which must influence such decision are that the steel industry is very large and is geared to the usage of certain types of manganese products (manganese ore, manganese metal, ferro-manganese, silico-manganese). It is also contended that the types of manganese products that can be extracted from nodules depend on the processing routes (pyrometallurgical or hydrometallurgical).

43. In addition to the cost and revenue considerations, other considerations may have to be taken into account. One such consideration is that the sea-bed mining industry will have large quantities of manganese-bearing material to dispose of. Whether the cost of disposal of this material as waste balanced against its strategic value justifies the cost of commercial recovery or whether its mere existence in waste dumps is sufficient as a strategic insurance, are matters which prospective sea-bed mining countries will no doubt carefully consider.

III. TYPES AND SOURCES OF REQUISITE STATISTICS

Requisite statistics

44. The discussion in the Third United Nations Conference on the Law of the Sea document A/CONF.62/L.84 and the Preparatory Commission document LOS/PCN/SCN.1/WP.1 as well as the deliberations in Special Commission 1 identify the data needs for the studies to be undertaken by the Special Commission. Since the effects of sea-bed production will be felt through the world supply-demand-price mechanism, data are required on a metal-by-metal basis (copper, nickel, cobalt and manganese) on (a) total world supply, (b) components of world supply - primary production, secondary production, changes in producers' stocks, (c) the share of each component of total world supply accounted for by individual countries, (d) total world demand, (e) components of world demand - consumption, changes in consumers' (including Governments') stocks, (f) the share of each component of total world demand accounted for by individual countries, (g) total world trade-exports, imports, re-exports, (h) the share of world exports, imports and re-exports accounted for by individual countries, and (i) prices. Supply, demand, trade and prices can be considered at different stages of processing - ores and concentrates, semi-processed mattes, blisters, etc., processed metal, wrought metal.

45. The immediate effect of sea-bed production is likely to be on price and/or volume of sales of land-based producers. Assuming that most of the production of developing land-based producer States is exported, data are required on direction of exports - countries to which exports are made, the volume and value of exports. The counterpart of this is the direction of imports of importing countries - countries from which imports come, the volume and value of imports. In this context, it should be noted that a significant part of the trade is carried out under long-term contracts, as mentioned in section II on the industry profiles. It is possible that trade under long-term contractual arrangements may not be affected to the same extent as would trade in the open market. Therefore, data on the volume and value of such trade may be useful.

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46. As was discussed in document LOS/PCN/SCN.1/WP.1, the effects on developing land-based producer States may be of diverse nature. Statistics may be required on the variables in the developing country economies that may be affected. These include (a) investment in the mineral industries concerned, (b) employment and labour income, (c) costs of production, (d) purchases of domestic inputs, (e) purchases of infrastructure services, (f) revenues, (g) taxes paid, (h) savings made, (i) net profits, and (j) gross and net foreign exchange earned. To assess the importance of the minerals concerned in the economies of developing countries, statistics on some so-called "reference" variables may be needed. These include (a) gross national product (GNP), gross domestic product (GDP), net national product (NNP which is identical with national income), (b) total export earnings, commodity trade balance or balance of payments, (c) total investment in the economy, (d) total employment in the economy, and (e) government revenues, etc.

47. The Special Commission will study the effects that sea-bed production may have on price or volume of exports of developing land-based producer States. This means the Special Commission will have to compare two situations - one with sea-bed production, the other without sea-bed production. The data needs for this comparison depend on the methodology to be used by the Special Commission. The fact that sea-bed production will take place in the future adds an additional dimension to the task of the Special Commission. Two situations at a future time need to be compared. The Special Commission can take one of two basic approaches: (a) it can forecast the "with" and "without" sea-bed production situations in the future and then compare the two situations; (b) it can concentrate on a methodology for comparison, independent of when in the future comparision would be made. The first approach has the advantage of estimating absolute magnitudes of effects, but entails the issue of forecasting precision. The second approach avoids the issue of forecasting and can yield relative magnitudes of effects; but it may be difficult to study measures to alleviate the problems of developing countries unless the absolute magnitude of effects are estimated. The main point, however, is that the data needs will vary depending on which approach is taken.

48. If forecasting is decided upon, there are basically two methods of making estimates for the future. The first method uses time as the explanatory variable for supply, demand and price. The second method tries to assess the causal relationships and uses geological, technological, economic, social and political factors as explanatory variables. In the second method, data on future values of the explanatory variables may be required. These may comprise a wide range and may include (a) extent and grade of deposits that are characterized as reserves or resources, (b) costs of production from these deposits, (c) stocks of recoverable metal in end-use products, (d) costs of secondary production, (e) world income, aggregated, and disaggregated at the individual country level, (f) world industrial production, aggregated, and disaggregated at the individual country level, (g) demand for end-use products, (h) coefficients of metal input per unit of end-use output, (i) extent of substitution of the metals concerned by and for other materials, and (j) prices of these other materials.

Sources of statistics

49. As is evident from the above discussion, various types of data are required for the purpose of the Special Commission and it goes without saying that these are

not available from any single source. Thus far, the Special Commission has essentially concentrated on the past and current production-consumption-trade-price data for the four metals. These have to be collected from various sources. However, the commodity coverage, the geographical coverage, coverage over time as well as definition of the terms vary among various sources and also within a single source. As far as possible, in this paper a single source has been used for time-series data on a given variable, e.g., production. This was done because it was felt that, relatively speaking, a single source provides more uniformity of coverage and definition. However, world-wide data over a 10-year time period are not available for some variables in any single source - consumption of cobalt and manganese, trade of cobalt, trade within the Eastern European (socialist) countries and between Eastern European and other countries, direction of trade at the specific commodity level. Finally, there is usually a lag of 2 to 3 years in the reporting of data.

50. Within the United Nations system, the United Nations Statistical Office under the Department of International Economic and Social Affairs maintains data bases on production and trade, and publishes annual production and trade data in the *Yearbook of Industrial Statistics* and the *Yearbook of International Trade Statistics*, respectively. The United Nations Conference on Trade and Development (UNCTAD) publishes trade and price data as well as other types of data on copper and manganese (the two minerals of interest to the Special Commission which are also part of the UNCTAD Integrated Programme for Commodities (IPC)). 8/ The International Monetary Fund (IMF) in its *International Financial Statistics* presents data on international trade in the minerals concerned for some countries. The World Bank maintains a data base on these minerals, but the data are obtained mostly from other sources.

51. Trade journals and other trade publications include data on some of the variables, but very rarely in a uniform fashion. Research publications occasionally put together data from scattered sources. At the country level, statistical yearbooks or other statistical publications often include data on the four metals, if they play an important role in the economy.

52. Other data sources which have world-wide coverage over a time period for some of the variables are the following:

Metal Statistics	Metallgesellschaft AG, Reuterweg 14, Post Office 3724, 6000 Frankfurt am Main Federal Republic of Germany
Copper	Mine production: world and by country; Smelter production: world and by country; Refined copper production: world and by country; Refined copper consumption: world and by country; Import and export by country; Prices (yearly and monthly average): United States of America (Source: *Engineering and Mining Journal*, New York); Germany, Federal Republic of (Source: *Del-Notiz Quotations*), United Kingdom (Source: London Metal Exchange).

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Nickel	Mine production: world and by country; Smelter production: world and by country; Consumption: world and by country; Prices of refined nickel: Germany, Federal Republic of, United Kingdom (Source: *Metal Bulletin*, London), Open market (Source: *Metal Bulletin*, London), United States of America (Source: *Engineering and Mining Journal*, New York).
Cobalt	Mine production: world and by country (Source: U.S. Bureau of Mines); Prices (year end) (Source: *Metal Bulletin*, London).
Manganese	Mine production: world and by country (Source: U.S. Bureau of Mines); Prices (year end) (Source: *Metal Bulletin*, London).
Mineral Commodity Summaries	U.S. Department of the Interior Bureau of Mines Washington, D.C., United States of America
Copper	Mine production: world and by country; Reserve base: world and by country; U.S. salient statistics; U.S. stockpile status.
Nickel	Mine production: world and by country; Reserve base: world and by country; U.S. salient statistics; U.S. stockpile status.
Cobalt	Mine production: world and by country; Reserve base: world and by country; U.S. salient statistics; U.S. stockpile status.
Manganese	Mine production: world and by country; Reserve base: world and by country; U.S. salient statistics; U.S. stockpile status. (Detailed definition, classification and guidelines for classification of reserve base are given.)
Mineral Yearbook	U.S. Department of the Interior Bureau of Mines Washington, D.C.
Copper	Salient statistics; U.S. and rest of the world production and capacity utilization; Mine production, smelter production, refinery production: world and by country; U.S. secondary copper production; U.S. consumption; U.S. imports and exports by country; Prices in U.S. and London Metal Exchange.

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Nickel	Salient statistics; U.S. production (mine shipment), consumption, imports & exports of nickel alloys; Mine production and smelter production: world and by country.
Cobalt	Salient statistics; U.S. cobalt production, consumption by end uses, consumption by forms, imports by country, import duties; Mine production: world and by country (note: Bulgaria, Cyprus, the German Democratic Republic, Greece, Indonesia, Poland, South Africa, Spain and Uganda produced cobalt in 1982, but adequate information is not available for reliable estimates).
Manganese	U.S. salient statistics; U.S. produced manganese and domestic shipments, consumption by end uses, import duties; Mine production: world and by country (note: Colombia, Cuba and Namibia may have produced manganese ores in 1982, but adequate information is not available for reliable estimates); Bolivia: export data; Brazil: sales of direct shipping of manganese ores.
Commodity Yearbook	Commodity Research Bureau Inc. 75 Montgomery St. Jersey City, New Jersey 07302, United States of America
Copper	Mine production, world and by country; U.S. salient statistics; U.S. consumption of refined copper (Source: U.S. Bureau of Mines); U.S. imports & exports (Source: U.S. Bureau of Mines, U.S. Department of Commerce); Prices on future commodity exchange (Source: New York Commodity Exchange (COMEX)).
Nickel	Mine production: world and by country; U.S. salient statistics (Source: U.S. Bureau of Mines); Yearly and monthly average price (Source: U.S. Bureau of Labour Statistics).
Cobalt	Mine production: world and by country; U.S. salient statistics (Source: U.S. Bureau of Mines).
Manganese	Mine production: world and by country; U.S. salient statistics (Source: U.S. Bureau of Mines); U.S. manganese imports (Source: U.S. Department of Commerce); Yearly and monthly average price (Source: U.S. Bureau of Labour Statistics).

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World Metal Statistics	World Bureau of Metal Statistics 41 Doughty St. London WC1N 2LF, United Kingdom
Copper	Mine production, smelter production, refinery production: world and by country; Refined consumption: world and by country; Scrap recovery: world and by country; East-West trade; World trade: refined and unrefined; Salient statistics by country (Australia, Austria, Canada, Chile, Germany, Federal Republic of, India, Italy, Japan, Netherlands, Norway, Papua New Guinea, Peru, Philippines, Scandinavia, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States, Yugoslavia, Zaire, Zambia); Daily, monthly, annual average prices.
Nickel	Mine production and smelter production: world and by country; Consumption: world and by country; East-West trade; Salient statistics by country (Canada, Dominican Republic, Finland, France, Germany, Federal Republic of, Japan, New Caledonia, Norway, Philippines, United Kingdom, United States); Daily, monthly, annual average prices.
Quarterly Economic Review of (Country)	The Economist Intelligence Unit Ltd., Spencer House, 27 St. James's Place London, SW1A 1NF, United Kingdom

Includes about 80 reviews covering nearly 160 countries. Provides profiles of general economic and political conditions of the countries concerned. Includes several quarterly indicators of economic activity, e.g., imports, exports, price indices, exchange rates, etc. However, there are only occasional coverage of the four minerals for countries where these minerals are considered to have an important role.

Notes

1/ Peter A. Rona, "Marine mineral resources", Natural Resources Forum, vol. 5, No. 1 (1981), p. 90.

2/ V. E. McKelvey et al., Analysis of the World Distribution of Metal-Rich Subsea Manganese Nodules (United States Department of the Interior, Geological Survey, Alexandria, Va., 1983) (USGS Circular 886, p. 1).

3/ U.S. Department of the Interior, Bureau of Mines, Mineral Commodity Summaries, 1984, p. 41.

/...

Notes (continued)

4/ U.S. Department of the Interior, Bureau of Mines, Mineral Commodity Profiles, 1983, Copper, p. 16.

5/ United Nations Conference on Trade and Development, Statistics of International Trade in Commodities Covered by the Integrated Programme for Commodities, Volume 1: Values (United Nations, 1983) (TD/B/IPC/STAT/1 (vol.1)), pp. 105, 108 and 109.

6/ United Nations, The Nickel Industry and the Developing Countries, (United Nations, New York, 1980) (Sales No. E.80.II.A.2), p. 7.

7/ Jean-Pierre Lévy and Nii Allotey Odunton, "Economic impact of sea-bed mineral resources development in light of the Convention on the Law of the Sea", Natural Resources Forum, vol. 8, No. 2 (1984), pp. 147-161.

8/ UNCTAD publishes Monthly Commodity Price Bulletin regularly and a Supplement to it every second year. As required, UNCTAD publishes international trade data at intervals. For an example, see footnote 5/. Vol. II of the publication referred there presents data on quantities.

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LOS/PCN/SCN.1/WP.2/Add.1
2 August 1984

ORIGINAL: ENGLISH

PREPARATORY COMMISSION FOR THE
INTERNATIONAL SEA-BED AUTHORITY
AND FOR THE INTERNATIONAL TRIBUNAL
FOR THE LAW OF THE SEA
Special Commission 1

BASIC DATA AND INFORMATION OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

Background paper by the Secretariat

CONTENTS

	Paragraphs	Page
PART B*		
I. DATA ON PRODUCTION, CONSUMPTION, EXPORTS, IMPORTS AND PRICES OF COPPER, NICKEL, COBALT AND MANGANESE	1 - 11	49
II. INFORMATION ON DEVELOPING LAND-BASED PRODUCER STATES	12 - 13	50
Annexes		
I. STATISTICAL TABLES		52
II. COPY OF NOTE VERBALE DATED 16 MAY 1984 FROM THE OFFICE OF THE SPECIAL REPRESENTATIVE OF THE SECRETARY-GENERAL FOR THE LAW OF THE SEA REQUESTING STATISTICS FROM STATES OR ENTITIES PARTICIPATING IN THE PREPARATORY COMMISSION		124

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* Part A is contained in document LOS/PCN/SCN.1/WP.2.

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PART B

I. DATA ON PRODUCTION, CONSUMPTION, EXPORTS, IMPORTS AND PRICES OF COPPER, NICKEL, COBALT AND MANGANESE

1. As reflected in the request by Special Commission 1 (LOS/PCN/SCN.1/WP.2, para. 1), its interest, at this time, is to have an overall picture of the world supply-demand situation for copper, nickel, cobalt and manganese so that the problems of developing land-based producer States may be placed in perspective. Statistics have been collected from sources in the public domain which have world-wide coverage. Sources from the United Nations system have been relied upon as far as possible. However, it should be noted that in some cases statistics are not available from publications of the United Nations system. In those cases, other international organizations, national or private institutions which publish world-wide statistics have been used. It is recommended that for details of nomenclature, definition, data collection, processing and presentation procedures, the data sources themselves be consulted.

2. In order for the Special Commission to be able to study movement over time, time series data for a 5-year or 10-year period have been presented, as far as practicable. The last year for which data have been given has been dictated by the availability of data in the source.

3. In the cases of production, consumption, exports and imports, an average has been calculated on the basis of figures for the latest years for which data are available (in most cases a 5-year average over the period 1977-1981 or 1978-1983). Statistics are presented for countries in descending order of this average.

4. The designations employed and the presentation of the material in this paper do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitation of its frontiers or boundaries.

Production

5. Since the Special Commission is concerned with the land-based producer States, data have been presented for mine production of metal-bearing ores and concentrates 1/ rather than production at different stages of processing. However, in the case of manganese, manganese-bearing ores and concentrates, processed as ferro-manganese, are important products as inputs to the major end-use sector - steel. Furthermore, there has been an increasing integration of ferro-manganese production with mine production of manganese. Therefore, data have been presented for both mine production and ferro-manganese production.

Consumption

6. In contrast with production, consumption data have been presented for refined/processed metal consumption, since in most cases this is the form in which the end-use sectors consume the metals. It should be noted that consumption data for cobalt, by country, are not readily available for the period 1977-1981.

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Exports and imports

7. International trade in the metals concerned, however, occurs for commodities at different stages of processing. In general, four stages can be identified: (a) raw ore, (b) semi-processed ore, (c) processed but unworked metal (unwrought form), and (d) semi-fabricated products to be used in the end-use sectors (worked form). This is the rationale behind the Standard International Trade Classification (SITC) 2/ where the former two stages are classified under mining and the latter two under manufacturing. However, in practice, there is considerable difficulty in recording traded commodities at the four stages, and statistical reporting by various countries may not be uniform with respect to these commodities.

8. SITC has been revised twice. In 1976 countries started reporting trade data to the United Nations Statistical Office according to the second revision. With the objective of uniformity in commodity coverage, this paper presents data for the period for which they have been published according to the second revision, i.e. 1977-1981.

9. It should be pointed out that under SITC, trade in cobalt is not separately recorded and is combined under the heading "Other base metals, not elsewhere specified". Therefore, one of the lacunae in this paper is that data on cobalt trade are scanty. In view of the potential importance of cobalt in studying the effects of sea-bed production, the Special Commission may wish to address the issue of the availability of cobalt trade data on a world-wide basis.

10. A further point is that trade data at a disaggregated level (SITC 3-, 4-, or 5-digit levels) are available from the United Nations Statistical Office publications for market economy countries. Data on trade among centrally planned economies and between centrally planned economies and market economies are not available.

Prices

11. Prices are usually quoted for different types of commodities derived from each of the four minerals and for different types of transactions. Attempts have been made to present price data on important commodities in representative transactions.

II. INFORMATION ON DEVELOPING LAND-BASED PRODUCER STATES

12. Because of the interest of the Special Commission in the possible problems that could be encountered by developing land-based producer States as a result of deep sea-bed mining, the objective of this paper has been to present an overall picture of the significance of the four metals in the economies of these States. It was felt that an average of the 5-year period 1977-1981, which eliminates year-to-year variations, would be more useful in this context.

13. Developing States have been identified in accordance with the standardized classification of the United Nations. 3/ Exports of the mineral commodities presented in the 10 tables (B.I.3.1 to B.I.3.10) by each of the countries under the above category have been compared with the total exports of that country as well as with its gross domestic product (GDP).

Notes

1/ With regard to the nomenclature of production and the details of items covered, see International Standard Industrial Classification of All Economic Activities (United Nations publication, Sales No. E.68.XVII.8) (ST/STAT/M.4/Rev.2) and Indexes to the International Standard Industrial Classification of All Economic Activities (United Nations publication, Sales No. E.71.XVII.8) (ST/STAT/M.4/Rev.2/Add.1).

2/ Commodity Indexes for the Standard International Trade Classification, Revision 2, Vols. I and II (United Nations publication, Sales No. E.81.XVII.3 and E.81.XVII.4) (ST/ESA/STAT/SER.M/38/Rev., vols. I and II).

3/ Handbook of International Trade and Development Statistics, Supplement (United Nations publication, Sales No. E/F.80.II.D.10), pp. viii-x.

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Annex I

STATISTICAL TABLES

List of tables

B.I.1. PRODUCTION

Table B.I.1.1.a. Production of copper ores and concentrates, by country, 1973-1982
Amount of copper content

Table B.I.1.1.b. Production of copper-bearing ores and concentrates, by country, 1973-1981
Percentage of total world production

Table B.I.1.2.a. Production of nickel ores and concentrates, by country, 1973-1982
Amount of nickel content

Table B.I.1.2.b. Production of nickel ores and concentrates, by country, 1973-1981
Percentage of total world production

Table B.I.1.3.a. Production of cobalt ores and concentrates, by country, 1973-1982
Amount of cobalt content

Table B.I.1.3.b. Production of cobalt ores and concentrates, by country, 1973-1981
Percentage of total world production

Table B.I.1.4.a. Production of manganese ores and concentrates, by country, 1973-1982
Amount of manganese content

Table B.I.1.4.b. Production of manganese ores and concentrates, by country, 1973-1982
Percentage of total world production

Table B.I.1.5.a. Production of ferro-manganese, by country, 1973-1982
Amount of ferro-manganese content

Table B.I.1.5.b. Production of ferro-manganese, by country, 1973-1982
Percentage of total world production

B.I.2. CONSUMPTION

Table B.I.2.1.a. Consumption of refined copper, by country, 1973-1982
Amount of copper content

Table B.I.2.1.b. Consumption of refined copper, by country, 1973-1982
Percentage of total world consumption

Table B.I.2.2.a. Consumption of refined nickel, by country, 1973-1982
Amount of nickel content

Table B.I.2.2.b. Consumption of refined nickel, by country, 1973-1982
Percentage of total world consumption

Table B.I.2.3.a. Consumption of cobalt, by country, 1973-1981
Amount of cobalt content

Table B.I.2.3.b. Consumption of cobalt, by country, 1973-1981
Percentage of total world consumption

Table B.I.2.4.a. Consumption of manganese ore, by country, 1970-1981
Amount (actual weight)

Table B.I.2.4.b. Consumption of manganese ore, by country, 1970-1981
Percentage of total world consumption

/...

Table B.I.2.5.a. Consumption of ferro-manganese by country, 1970-1981
Amount of ferro-manganese content

Table B.I.2.5.b. Consumption of ferro-manganese by country, 1970-1981
Percentage of total world consumption

B.I.3. EXPORTS

Table B.I.3.1.a. Exports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981
By value

Table B.I.3.1.b. Exports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981
Percentage of total

Table B.I.3.2.a. Exports of copper waste and scrap, by country, 1977-1981
By value

Table B.I.3.2.b. Exports of copper waste and scrap, by country, 1977-1981
Percentage of total

Table B.I.3.3.a. Exports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981
By value

Table B.I.3.3.b. Exports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981
Percentage of total

Table B.I.3.4.a. Exports of copper and copper alloys, worked, by country, 1977-1981
By value

Table B.I.3.4.b. Exports of copper and copper alloys, worked, by country, 1977-1981
Percentage of total

Table B.I.3.5.a. Exports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981
By value

Table B.I.3.5.b. Exports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981
Percentage of total

Table B.I.3.6.a. Exports of nickel and nickel alloys, unwrought, by country, 1977-1981
By value

Table B.I.3.6.b. Exports of nickel and nickel alloys, unwrought, by country, 1977-1981
Percentage of total

Table B.I.3.7.a. Exports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981
By value

Table B.I.3.7.b. Exports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981
Percentage of total

Table B.I.3.8. Exports of cobalt, by country, 1977-1981
By value

Table B.I.3.9.a. Exports of manganese ore and concentrates, by country, 1977-1981
By value

/...

Table B.I.3.9.b. Exports of manganese ore and concentrates, by country, 1977-1981
Percentage of total

Table B.I.3.10.a. Exports of ferro-manganese, by country, 1977-1981
By value

Table B.I.3.10.b. Exports of ferro-manganese, by country, 1977-1981
Percentage of total

B.I.4. IMPORTS

Table B.I.4.1.a. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981
By value

Table B.I.4.1.b. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981
Percentage of total

Table B.I.4.2.a. Imports of copper waste and scrap, by country, 1977-1981
By value

Table B.I.4.2.b. Imports of copper waste and scrap, by country, 1977-1981
Percentage of total

Table B.I.4.3.a. Imports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981
By value

Table B.I.4.3.b. Imports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981
Percentage of total

Table B.I.4.4.a. Imports of copper and copper alloys, worked, by country, 1977-1981
By value

Table B.I.4.4.b. Imports of copper and copper alloys, worked, by country, 1977-1981
Percentage of total

Table B.I.4.5.a. Imports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981
By value

Table B.I.4.5.b. Imports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981
Percentage of total

Table B.I.4.6.a. Imports of nickel and nickel alloys, unwrought, by country, 1977-1981
By value

Table B.I.4.6.b. Imports of nickel and nickel alloys, unwrought, by country, 1977-1981
Percentage of total

Table B.I.4.7.a. Imports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981
By value

Table B.I.4.7.b. Imports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981
Percentage of total

Table B.I.4.8. Imports of cobalt, by country, 1977-1981
By value

/...

Table B.I.4.9.a. Imports of manganese ore and concentrates, by country, 1977-1981
By value

Table B.I.4.9.b. Imports of manganese ore and concentrates, by country, 1977-1981
Percentage of total

Table B.I.4.10.a. Imports of ferro-manganese, by country, 1977-1981
By value

Table B.I.4.10.b. Imports of ferro-manganese, by country, 1977-1981
Percentage of total

B.I.5. PRICES

Table B.I.5.1. Average annual prices of copper, nickel, cobalt and manganese, 1973-1983

B.II.1. DEVELOPING LAND-BASED PRODUCER STATES

Table B.II.1.1. Developing land-based producer States

B.II.2. SIGNIFICANCE OF FOUR MINERALS IN THE ECONOMIES OF DEVELOPING LAND-BASED PRODUCER STATES

Table B.II.2.1. Gross domestic product (GDP) and total exports f.o.b. of developing land-based producer States, 1977-1981

Table B.II.2.2. Export of copper, nickel, cobalt and manganese by developing land-based producer States as percentages of their total exports and gross domestic product (GDP)

Copy of note verbale dated 16 May 1984 from the Office of the Special Representative of the Secretary-General for the Law of the Sea requesting statistics from States or entities participating in the Preparatory Commission.

B.I.1. PRODUCTION*

Table B.I.1.1.a. Production of copper ores and concentrates, by country, 1973-1982

Amount of copper content 1/

(000's metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982) 2/
United States	1 558.5	1 448.8	1 282.2	1 456.6	1 364.4	1 357.6	1 443.6	1 181.1	1 538.2	1 139.6	1 332.0
USSR 3/	1 060.0	1 060.0	1 100.0	1 130.0	1 100.0	1 140.0	1 130.0	1 130.0	1 140.0	1 180.0	1 144.0
Chile	743.2	904.5	831.0	1 013.2	1 053.5	1 029.5	1 067.8	1 063.0	1 105.5	1 255.1	1 104.2
Zambia	883.5	883.8	806.3	849.6	819.2	766.6	724.0	713.8	689.8	720.3	722.9
Canada	823.9	821.4	733.8	730.9	759.4	659.4	636.4	716.4	718.1	n.a.	682.6
Zaire	488.6	499.7	495.9	443.9	452.7	472.5	400.0 3/	459.0 3/	505.0 3/	n.a.	459.1
Peru	215.1	222.4	165.8	228.4	327.4	376.4	397.4	366.7	327.6	n.a.	367.0
Poland	169.7	187.4	230.1	267.0	284.9	316.2	346.5	360.4	309.6	366.7	339.9
Philippines	221.2	225.5	225.8	237.6	272.8	263.4	298.3	304.5	302.3	293.1	292.3
Australia	198.7	246.7	235.6	218.3	217.2	217.1	238.7	235.1	246.4	259.6	239.4
China 3/	180.0	180.0	180.0	180.0	195.0	200.0	200.0	200.0	200.0	200.0	200.0
South Africa	175.8	179.1	178.9	196.9	205.4	205.7	190.6	200.7	199.4	n.a.	199.1
Papua New Guinea	182.9	184.1	172.5	176.5	182.3	198.6	170.8	146.8	165.4	170.0	170.3
Mexico	80.5	82.7	78.2	89.0	89.7	87.2	107.1	175.4	230.5	239.1	167.9
Yugoslavia	111.8	112.1	114.9	120.1	116.2	123.3	111.4	114.8	111.0	119.3	116.0
Indonesia	37.9	65.4	62.7	69.1	57.1	58.9	60.2	59.0	62.5	71.4	62.4
Bulgaria	48.0 3/	51.6	55.0 3/	57.0 3/	57.0 3/	58.0	60.0	62.0	62.0	70.0	62.4
Japan	91.3	82.1	84.6	81.6	81.4	72.0	59.1	52.6	51.5	50.7	57.2
Sweden	44.8	40.6	40.6	44.9	44.8	47.4	45.8	44.0	53.8	55.4 3/	49.3
Spain	33.1	28.9	31.3	35.6	36.0	36.9	36.0	42.5	50.9	47.6	42.8
Namibia	28.8	33.2	34.9	43.5	49.2	37.7	41.9	39.2	44.3	48.8	42.4
Finland	36.0	36.7	38.6	44.0	46.7	46.8	41.1	36.8	38.2	38.1	40.2
Romania 3/	40.0	38.0	35.0	30.0	27.0	27.0	29.0	28.0	30.0	33.0	29.4
Turkey	28.0	39.2	34.5	29.9	33.4	27.2	30.5	20.5	32.1	32.8	28.6
Norway	29.9	24.1	28.1	31.1	29.1	29.1	28.7	28.9	28.1	27.9	28.6
Malaysia	0.0	0.0	3.8	18.2	24.0	25.9	24.5	27.0	28.6	30.0	27.2
Zimbabwe	51.9	47.5	47.6	41.3	34.8	33.8	29.7	26.9	15.8	24.7	26.2
India	17.2	20.8	24.2	29.1	29.0	26.0	27.7	24.5	25.5	24.2	25.6
Botswana	0.0	2.8	6.5	12.5	11.8	14.6	14.6	15.6	17.8	18.4	16.2
Korea, Dem. Peo. Rep. 3/	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0	n.a.	15.0
German Dem. Rep. of	18.0	18.0	16.5	16.0	17.0	15.0	14.0	11.8	12.0	13.0	13.2
Albania	7.0 3/	7.0	9.0	10.0 3/	10.0 3/	11.5	9.7	11.5 3/	12.0 3/	n.a.	11.2
Czechoslovakia	11.0	10.9	11.2	10.1	9.9	9.1	10.4	11.4	9.5	9.9	10.1
Iran (Islamic Rep. of)	1.8 3/	1.0	1.8 3/	6.0 3/	13.5 3/	6.0 3/	3.0 3/	1.0 3/	2.0 3/	23.5 3/	7.1
Brazil	3.4	3.1	2.0	0.0	0.0	0.0	0.0	0.4	13.9	19.2	6.7
Morocco	4.3	5.3	4.8	4.6	3.4	3.4	6.6	6.7	6.5	n.a.	5.8
Ireland	13.0	12.6	9.8	4.1	4.8	4.8	4.8	4.2	3.5	1.6	3.8
Cuba	2.1	2.9	2.8	2.9	2.6	2.8	2.8	3.3	2.9	2.6	2.9

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Table B.I.1. PRODUCTION (continued)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982) 2/
Bolivia	8.3	8.0	6.2	5.1	3.2	3.3	1.8	1.9	2.6	2.3	2.4
Congo	1.8	0.9	0.9	0.4	1.0	0.6	2.3	2.5	1.3 3/	n.a.	1.7
Cyprus	14.2	12.0	9.9	7.9	7.0	5.2	1.2	0.1	0.2	0.8	1.5
Guatemala	n.a.	n.a.	n.a.	n.a.	2.5	2.1	1.8	0.8	0.7	n.a.	1.4
Ecuador	0.3	0.2	0.2	0.3	1.0	0.8	1.2	1.2	1.2	n.a.	1.1
Korea, Rep. of	1.0	3.2	2.3	2.1	1.7	0.7	0.4	0.9	1.1	1.4	0.9
Germany, Fed. Rep. of	1.4	1.7	2.0	1.6	1.2	0.8	n.a.	n.a.	n.a.	n.a.	0.8
Portugal	0.7	0.6	0.4	0.4	0.3	0.3	0.5	0.7	0.6	0.5	0.5
Mauritania	21.8	20.1	16.2	9.4	7.6	1.8	0.0	0.0	0.0	n.a.	0.5
Italy	0.9	0.9	0.8	1.0	0.7	0.5	0.3	0.6	0.8	0.0	0.4
Israel	10.5	9.5	8.0	2.1	0.0	0.0	0.0	0.5	0.4	0.4	0.3
Uganda	14.2	11.6	8.5	7.0	4.0	1.3	0.0	0.0	0.0	0.0	0.3
Algeria	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Argentina	0.3	0.3	0.4	0.3	0.2	0.3	0.1	0.2	0.1	0.0	0.1
Mozambique	3.4	1.4	2.5	2.0	3.0	0.3	0.2	0.0	0.0	n.a.	0.1
France	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1 3/	0.1
Burma	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Hungary	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.1
Nicaragua	1.5	1.8	0.6	1.3	0.5	0.1 3/	0.0	0.0	0.0	n.a.	0.0
Kenya	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	0.0
Austria	2.8	2.6	2.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7 738.1	7 898.8	7 491.3	8 017.7	8 112.2	8 041.2	8 068.0	7 950.2	8 416.8	6 591.4 4/	8 163.1

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* For sources and notes please refer to the end of section B.I.1.

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Table B.I.1.1.b. Production of copper-bearing ores and concentrates, by country, 1973-1981 5/

Percentage of total world production

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	5-year average 6/
United States	20.14	18.34	17.12	18.17	16.82	16.88	17.89	14.86	18.28	16.32
USSR	13.70	13.42	14.68	14.09	13.56	14.18	14.01	14.21	13.54	14.01
Chile	9.60	11.45	11.09	12.64	12.99	12.80	13.23	13.37	13.13	13.53
Zambia	11.42	11.19	10.76	10.60	10.10	9.53	8.97	8.98	8.20	8.86
Canada	10.65	10.40	9.80	9.12	9.36	8.20	7.89	9.01	8.53	8.36
Zaire	6.31	6.33	6.62	5.54	5.58	5.88	4.96	5.77	6.00	5.62
Peru	2.78	2.82	2.21	2.85	4.04	4.60	4.93	4.61	3.89	4.50
Poland	2.19	2.37	3.07	3.38	3.51	3.93	4.29	4.53	3.68	4.16
Philippines	2.86	2.85	3.01	2.96	3.36	3.28	3.70	3.83	3.59	3.58
Australia	2.57	3.12	3.14	2.72	2.68	2.70	2.96	2.96	2.93	2.93
China	2.33	2.28	2.40	2.25	2.40	2.49	2.48	2.52	2.38	2.45
South Africa	2.27	2.27	2.39	2.46	2.53	2.56	2.36	2.52	2.37	2.44
Papua New Guinea	2.36	2.33	2.30	2.20	2.25	2.47	2.12	1.85	1.97	2.09
Mexico	1.04	1.05	1.04	1.11	1.11	1.08	1.33	2.21	2.74	2.06
Yugoslavia	1.44	1.42	1.53	1.50	1.43	1.53	1.38	1.44	1.32	1.42
Indonesia	0.49	0.83	0.84	0.86	0.70	0.73	0.75	0.74	0.74	0.76
Bulgaria	0.62	0.65	0.73	0.71	0.70	0.72	0.74	0.78	0.74	0.76
Japan	1.18	1.04	1.13	1.02	1.00	0.90	0.73	0.66	0.61	0.70
Sweden	0.58	0.51	0.54	0.56	0.55	0.59	0.57	0.55	0.64	0.60
Spain	0.43	0.37	0.42	0.44	0.44	0.46	0.45	0.53	0.60	0.52
Namibia	0.37	0.42	0.47	0.54	0.61	0.47	0.52	0.49	0.53	0.52
Finland	0.47	0.46	0.52	0.55	0.58	0.58	0.51	0.46	0.45	0.49
Romania	0.52	0.48	0.47	0.37	0.33	0.34	0.36	0.35	0.36	0.36
Turkey	0.36	0.50	0.46	0.37	0.41	0.34	0.38	0.26	0.38	0.35
Norway	0.39	0.31	0.38	0.39	0.36	0.36	0.36	0.36	0.33	0.35
Malaysia	0.00	0.00	0.05	0.23	0.30	0.32	0.30	0.34	0.34	0.33
Zimbabwe	0.67	0.60	0.64	0.52	0.43	0.42	0.37	0.34	0.19	0.32
India	0.22	0.26	0.32	0.36	0.36	0.32	0.34	0.31	0.30	0.31
Botswana	0.00	0.04	0.09	0.16	0.15	0.18	0.18	0.20	0.21	0.20
Korea, Dem. Peop. Rep.	0.17	0.16	0.17	0.19	0.18	0.19	0.19	0.19	0.18	0.18
German Dem. Rep. of	0.23	0.23	0.22	0.20	0.21	0.19	0.17	0.15	0.14	0.16
Albania	0.09	0.09	0.12	0.12	0.12	0.14	0.12	0.14	0.14	0.14
Czechoslovakia	0.14	0.14	0.15	0.13	0.12	0.11	0.13	0.14	0.11	0.12
Iran (Islamic Rep. of)	0.02	0.01	0.02	0.07	0.17	0.07	0.04	0.01	0.02	0.09
Brazil	0.04	0.04	0.03	0.00	0.00	0.00	0.00	0.01	0.17	0.08
Morocco	0.06	0.07	0.06	0.06	0.04	0.04	0.08	0.08	0.08	0.07
Ireland	0.17	0.16	0.13	0.05	0.06	0.06	0.06	0.05	0.04	0.05
Cuba	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.04	0.03	0.04
Bolivia	0.11	0.10	0.08	0.06	0.04	0.04	0.02	0.02	0.03	0.03
Congo	0.02	0.01	0.01	0.00	0.01	0.01	0.03	0.03	0.02	0.02
Cyprus	0.18	0.15	0.13	0.10	0.09	0.06	0.02	0.00	0.00	0.02
Guatemala	n.a.	n.a.	n.a.	n.a.	0.03	0.03	0.02	0.01	0.01	0.02
Ecuador	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.01	0.01
Korea, Rep. of	0.01	0.04	0.03	0.03	0.02	0.01	0.00	0.01	0.01	0.01
Germany, Fed. Rep. of	0.02	0.02	0.03	0.02	0.01	0.01	n.a.	n.a.	n.a.	0.01
Portugal	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Mauritania	0.28	0.25	0.22	0.12	0.09	0.02	0.00	0.00	0.00	0.01

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Table B.I.1.1.b. (continued)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	5-year average 6/
Italy	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01
Israel	0.14	0.12	0.11	0.03	0.00	0.00	0.00	0.01	0.00	0.00
Uganda	0.18	0.15	0.11	0.09	0.05	0.02	0.00	0.00	0.00	0.00
Algeria	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Argentina	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mozambique	0.04	0.02	0.03	0.02	0.04	0.00	0.00	0.00	0.00	0.00
France	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hungary	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nicaragua	0.02	0.02	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Kenya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Austria	0.04	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.1.2.a. Production of nickel ores and concentrates, by country, 1973-1982

Amount of nickel content 1/

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982) 2/
USSR 3/	113 000	125 000	152 000	141 000	147 000	149 000	151 000	154 000	158 000	n.a.	153 000
Canada	249 047	269 071	242 180	240 824	232 512	128 310	126 482	184 802	155 175	n.a.	148 692
Australia	36 104	42 247	49 106	80 953	81 099	86 991	80 385	64 393	73 367	81 424	77 312
New Caledonia	115 872	136 825	133 478	119 683	116 795	67 156	83 019	89 424	80 570	60 101	76 054
Cuba	35 199	33 879	37 327	37 021	36 750	34 787	32 324	38 207	40 260	37 603	36 636
Indonesia	20 816	21 093	19 226	26 449	31 260	30 168	37 264	36 912	36 888	39 382	36 123
South Africa	19 426	22 100	20 754	22 371	21 955	28 700	30 240	25 700	26 400	n.a.	27 760
Philippines	399	326	9 364	15 239	36 781	29 528	21 478	25 381	21 485	11 314	21 837
Botswana	0	2 577	6 447	12 581	12 099	16 049	16 173	15 442	18 275	17 756	16 739
Dominican Republic	28 298	30 492	26 922	24 999	24 899	14 302	25 112	16 350	19 022	5 668	16 091
Zimbabwe	10 873	10 694	9 121	14 604	16 671	15 701	14 591	15 074	13 018	13 309	14 339
Greece	13 900	15 100	14 800	16 450	9 630	14 888	14 632	13 880	10 860	4 778	11 808
United States	16 576	15 073	15 410	14 940	13 015	12 255	13 667	13 293	10 976	2 883	10 615
Albania	5 800	5 600	6 500	7 000	7 500	8 000	8 500	8 500	8 800	n.a.	8 450
Brazil	4 122	3 536	3 190	5 273	4 241	3 600	2 964	4 291	6 811	13 093	6 152
Finland	7 228	6 018	5 299	6 433	5 810	4 377	5 800	6 400	6 900	6 335	5 962
Guatemala	0	0	0	0	298	1 079	6 199	6 744	5 000	n.a.	4 756
German Dem. Rep. of	2 000	2 200	2 400	2 500	2 500	2 700	2 500	2 700	2 700	2 500	2 620
Poland 3/	1 500	2 000	2 000	2 360	2 360	2 360	2 090	2 090	2 090	2 090	2 144
Norway	600	700	400	400	500	500	600	600	500	500	540
Morocco 3/	200	250	280	140	160	170	160	130	130	n.a.	148
Burma 3/	19	31	9	24	17	18	18	14	20	20	18
Mexico	32	25	50	56	34	22	1	0	0	0	5
Korea, Rep. of	14	0	0	0	0	0	0	0	0	0	0
Total	681 025	744 837	756 263	791 300	803 886	650 661	675 199	724 327	697 247	298 756 4/	677 799

Table B.I.1.2.b. **Production of nickel ores and concentrates, by country, 1973-1981** 5/

Percentage of total world production

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	5-year average 6/
USSR	16.59	16.78	20.10	17.82	18.29	22.90	22.36	21.26	22.66	22.57
Canada	36.57	36.12	32.02	30.43	28.92	19.72	18.73	25.51	22.26	21.94
Australia	5.30	5.67	6.49	10.23	10.09	13.37	11.91	8.89	10.52	11.41
New Caledonia	17.01	18.37	17.65	15.12	14.53	10.32	12.30	12.35	11.56	11.22
Cuba	5.17	4.55	4.94	4.68	4.57	5.35	4.79	5.27	5.77	5.41
Indonesia	3.06	2.83	2.54	3.34	3.89	4.64	5.52	5.10	5.29	5.33
South Africa	2.85	2.97	2.74	2.83	2.73	4.41	4.48	3.55	3.79	4.10
Philippines	0.06	0.04	1.24	1.93	4.58	4.54	3.18	3.50	3.08	3.22
Botswana	0.00	0.35	0.85	1.59	1.51	2.47	2.40	2.13	2.62	2.47
Dominican Republic	4.16	4.09	3.56	3.16	3.10	2.20	3.72	2.26	2.73	2.37
Zimbabwe	1.60	1.44	1.21	1.85	2.07	2.41	2.16	2.08	1.87	2.12
Greece	2.04	2.03	1.96	2.08	1.20	2.29	2.17	1.92	1.56	1.74
United States	2.43	2.02	2.04	1.89	1.62	1.88	2.02	1.84	1.57	1.57
Albania	0.85	0.75	0.86	0.88	0.93	1.23	1.26	1.17	1.26	1.25
Brazil	0.61	0.47	0.42	0.67	0.53	0.55	0.44	0.59	0.98	0.91
Finland	1.06	0.81	0.70	0.81	0.72	0.67	0.86	0.88	0.99	0.88
Guatemala	0.00	0.00	0.00	0.00	0.04	0.17	0.92	0.93	0.72	0.70
German Dem. Rep. of	0.29	0.30	0.32	0.32	0.31	0.41	0.37	0.37	0.39	0.39
Poland	0.22	0.27	0.26	0.30	0.29	0.36	0.31	0.29	0.30	0.32
Norway	0.09	0.09	0.05	0.05	0.06	0.08	0.09	0.08	0.07	0.08
Morocco	0.03	0.03	0.04	0.02	0.02	0.03	0.02	0.02	0.02	0.02
Burma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mexico	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Korea, Rep. of	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.1.3.a. Production of cobalt ores and concentrates, by country, 1973-1982

Amount of cobalt content 1/

(Thousands of metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982) 2/
Zaire	15 052	17 545	13 644	10 686	10 215	13 146	15 000 3/	15 500 3/	14 000 3/	n.a.	14,412
Australia	310	201	1 055	2 026	2 210	2 646	3 451	3 133	3 513	3 075	3 164
Zambia	1 929	1 964	1 843	1 620	1 703	1 560	3 271	3 309	2 569	2 444	2 631
USSR 3/	1 700	1 750	2 000	1 800	1 900	1 950	2 000	2 150	2 250	2 350	2 140
New Caledonia 3/	1 740	1 920	3 770	3 036	3 036	1 798	2 218	2 239	1 996	1 905	2 031
Canada	1 517	1 564	1 354	1 356	1 485	1 234	1 640	2 118	1 816	n.a.	1 702
Cuba 3/	1 600	1 600	1 800	1 600	1 590	1 460	1 230	1 610	1 710	1 500	1 502
Philippines	40 3/	30 3/	117	492 3/	1 084	1 192	1 370	1 331	997	571	1 092
Finland	1 855	1 300	1 256	1 279	1 227	1 236	1 070	950	940	1 038	1 047
Morocco	1 421	1 753	1 961	790	858	959	880	737	689	n.a.	816
Botswana 3/	10	30	80	130	160	260	290	230	250	254	257
Zimbabwe	23	28	18	0	0	17	205	115	94	98	106
Total	27 197	29 685	28 898	24 815	25 468	27 458	32 625	33 422	30 824	13 235 4/	30 899

Table B.I.1.3.b. Production of cobalt ores and concentrates, by country, 1973-1981 5/

Percentage of total world production

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	5-year average (1978-1982) 6/
Zaire	55.34	59.10	47.21	43.06	40.11	47.88	45.98	46.38	45.42	46.64
Australia	1.14	0.68	3.65	8.16	8.68	9.64	10.58	9.37	11.40	10.24
Zambia	7.09	6.62	6.38	6.53	6.69	5.68	10.03	9.90	8.33	8.51
USSR	6.25	5.90	6.92	7.25	7.46	7.10	6.13	6.43	7.30	6.93
New Caledonia	6.40	6.47	13.05	12.23	11.92	6.55	6.80	6.70	6.48	6.57
Canada	5.58	5.27	4.69	5.46	5.83	4.49	5.03	6.34	5.89	5.51
Cuba	5.88	5.39	6.23	6.45	6.24	5.32	3.77	4.82	5.55	4.86
Philippines	0.15	0.10	0.40	1.98	4.26	4.34	4.20	3.98	3.23	3.53
Finland	6.82	4.38	4.35	5.15	4.82	4.50	3.28	2.84	3.05	3.39
Morocco	5.22	5.91	6.79	3.18	3.37	3.49	2.70	2.21	2.24	2.64
Botswana	0.04	0.10	0.28	0.52	0.63	0.95	0.89	0.69	0.81	0.83
Zimbabwe	0.08	0.09	0.06	0.00	0.00	0.06	0.63	0.34	0.30	0.34
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.1.4.a. Production of manganese ores and concentrates, by country, 1973-1982

Amount of manganese content 1/

(Thousands of metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982) 2/
USSR	2 838.6	2 847.5	2 951.4	2 991.8	2 903.8	2 945.1	3 161.6	3 039.6	2 760.8	2 957.4	2 972.90
South Africa	1 735.2	1 895.0	2 006.4	2 409.0	2 338.2	1 950.4	2 290.6	2 355.3	2 076.9	n.a.	2 168.30
Brazil	1 141.5	1 232.1	1 244.5	1 267.8	1 204.0	1 207.5	1 236.0	1 339.4	1 393.0	1 268.5	1 288.89
Gabon	979.2	1 091.0	1 116.2	1 093.9	941.0	872.3	1 173.0	1 172.0 3/	758.6	n.a.	993.98
Australia	632.5	770.6	672.9	771.1	811.4	633.0	662.2	1 039.1	717.2	587.9	727.88
India	561.1	556.4	584.4	666.0	677.0	598.3	658.6	629.2	573.1	555.4	602.91
China 3/	100.0	100.0	100.0	200.0	200.0	250.0	300.0	300.0	320.0	320.0	298.00
Mexico	131.0	145.1	154.2	163.2	175.2	188.3	177.4	161.0	208.2	183.1	183.60
Ghana	150.2	123.4	172.4	152.1	140.4	152.0	121.8	120.0	107.1	76.8	115.54
Morocco	74.8	89.4	67.0	60.1	58.2	64.7	69.5	66.9	56.2	n.a.	64.33
Romania	27.0	31.0 3/	28.0	31.0	30.5	28.0	46.0	53.0	57.0	55.0	47.80
Hungary	32.1	26.6	27.8	25.9	28.7	28.2	23.6	23.3	20.0	25.0	24.02
Japan	53.1	44.8	42.5	38.7	32.8	28.7	23.2	19.1	21.0	19.9	22.39
United States	23.4	31.6	16.9	28.1	24.6	34.7	28.0	20.6	21.9	3.6	21.77
Bulgaria	10.7	9.6	10.0	11.2	11.4	11.4	12.3	14.2	13.2	13.2	12.86
Thailand	12.9	10.7	8.7	17.6	26.9	25.3	12.4	19.0	3.8	2.7	12.65
Yugoslavia	3.3	4.2	5.9	6.5	8.7	9.8	10.5	10.6	10.9	9.6	10.28
Turkey	1.4	1.3	11.6	11.6	13.6	22.2	10.4	11.9	4.1	1.9	10.09
Chile	5.7	11.2	7.7	7.5	7.0	8.3	8.6	9.0	8.6	5.2	7.94
Iran (Islamic Rep. of)	8.4	11.4	13.7	13.0	13.0	10.0	7.0 3/	0.0	0.0	n.a.	4.25
Vanuatu	12.6	19.4	19.1	18.5	11.3	10.1	4.4	1.4	0.0	n.a.	3.98
Zaire	170.0	160.5	160.4	94.7	21.3	0.0	0.0	8.6	5.2	n.a.	3.45
Greece	3.1	4.0	4.1	4.1	4.4	3.5	2.8	2.5	2.9	3.6	3.07
Italy	7.1	4.2	0.0	1.2	2.5	2.1	2.9	2.7	2.6	2.6	2.58
Indonesia	8.1	9.4	7.1	5.1	3.1	3.1	3.1	2.2	1.3	1.9	2.32
Philippines	2.0	0.4	0.0	4.3	7.5	2.2	2.1	1.5	1.8	2.3	1.98
Argentina	3.6	6.5	10.9	10.0	13.8	4.0	3.2	1.5	0.5	0.3	1.91
Bolivia	0.2	0.2	0.4	3.7	2.6	0.4	3.1	0.4	0.3	0.1	0.85
Egypt	1.1	2.1	1.5	1.8	1.6	2.5	0.0	0.0	0.0	0.0	0.50
Sudan	0.0	0.0	0.0	0.2	0.2	0.2	0.2 3/	0.2 3/	0.2 3/	n.a.	0.20
Korea, Rep. of	0.7	0.8	1.3	0.6	0.3	0.3	0.0	0.0	0.0	n.a.	0.08
Pakistan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.02
Botswana	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Peru	2.9	0.6	0.7	0.9	0.0	0.0	0.0	0.0	0.0	n.a.	0.00
Portugal	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Czechoslovakia	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	n.a.	0.00
Spain	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Total	8 735.9	9 241.2	9 447.9	10 111.4	9 715.0	9 096.6	10 054.5	10 424.3	9 146.5	6 096.1 4/	8 963.61

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Table B.I.1.4.b. Production of manganese ores and concentrates, by country, 1973-1982 5/

Percentage of total world production

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	5-year average 6/
USSR	32.49	30.81	31.24	29.59	29.89	32.38	31.44	29.16	30.18	33.17
South Africa	19.86	20.51	21.24	23.82	24.07	21.44	22.78	22.59	22.71	24.19
Brazil	13.07	13.33	13.17	12.54	12.39	13.27	12.29	12.85	15.23	14.38
Gabon	11.21	11.81	11.81	10.82	9.69	9.59	11.67	11.24	8.29	11.09
Australia	7.24	8.34	7.12	7.63	8.35	6.96	6.59	9.97	7.84	8.12
India	6.42	6.02	6.19	6.59	6.97	6.58	6.55	6.04	6.27	6.73
China	1.14	1.08	1.06	1.98	2.06	2.75	2.98	2.88	3.50	3.32
Mexico	1.50	1.57	1.63	1.61	1.80	2.07	1.76	1.54	2.28	2.05
Ghana	1.72	1.34	1.82	1.50	1.45	1.67	1.21	1.15	1.17	1.29
Morocco	0.86	0.97	0.71	0.59	0.60	0.71	0.69	0.64	0.61	0.72
Romania	0.31	0.34	0.30	0.31	0.31	0.31	0.46	0.51	0.62	0.53
Hungary	0.37	0.29	0.29	0.26	0.30	0.31	0.23	0.22	0.22	0.27
Japan	0.61	0.48	0.45	0.38	0.34	0.32	0.23	0.18	0.23	0.25
United States	0.27	0.34	0.18	0.28	0.25	0.38	0.28	0.20	0.24	0.24
Bulgaria	0.12	0.10	0.11	0.11	0.12	0.13	0.12	0.14	0.14	0.14
Thailand	0.15	0.12	0.09	0.17	0.28	0.28	0.12	0.18	0.04	0.14
Yugoslavia	0.04	0.05	0.06	0.06	0.09	0.11	0.10	0.10	0.12	0.11
Turkey	0.02	0.01	0.12	0.11	0.14	0.24	0.10	0.11	0.04	0.11
Chile	0.07	0.12	0.08	0.07	0.07	0.09	0.09	0.09	0.09	0.09
Iran (Islamic Rep. of)	0.10	0.12	0.15	0.13	0.13	0.11	0.07	0.00	0.00	0.05
Vanuatu	0.14	0.21	0.20	0.18	0.12	0.11	0.04	0.01	0.00	0.04
Zaire	1.95	1.74	1.70	0.94	0.22	0.00	0.00	0.08	0.06	0.04
Greece	0.04	0.04	0.04	0.04	0.05	0.04	0.03	0.02	0.03	0.03
Italy	0.08	0.05	0.00	0.01	0.03	0.02	0.03	0.03	0.03	0.03
Indonesia	0.09	0.10	0.08	0.05	0.03	0.03	0.03	0.02	0.01	0.03
Philippines	0.02	0.00	0.00	0.04	0.08	0.02	0.02	0.01	0.02	0.02
Argentina	0.04	0.07	0.12	0.10	0.14	0.04	0.03	0.01	0.01	0.02
Bolivia	0.00	0.00	0.00	0.04	0.03	0.00	0.03	0.00	0.00	0.01
Egypt	0.01	0.02	0.02	0.02	0.02	0.03	0.00	0.00	0.00	0.01
Sudan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Korea, Rep. of	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Pakistan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botswana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peru	0.03	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Portugal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czechoslovakia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spain	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.1.5.a. Production of ferro-manganese, by country, 1973-1982

Amount of ferro-manganese content

(Thousands of metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982) 2/
USSR	971	966	982	800	800	600	600	555	492	n.a.	562
Japan	617	624	650	632	527	456	603	569	568	538	547
France	544	533	427	367	373	397	449	480	313	332	394
Norway	235	336	339	375	283	310	380	297	233	224	289
Germany, Fed. Rep. of	247	320	216	220	175	209	233	200	214	555	282
Canada	202	248	160	225	193	240	172	292	282	n.a.	247
United States	620	494	522	438	303	247	288	172	175	108	198
India	177	195	199	176	193	220	187	162	209	200	196
Brazil	78	77	87	99	129	118	134	140	108	121	124
Poland	129	133	148	124	134	126	138	132	110	92	120
Spain	109	113	127	133	141	134	148	123	99	82	117
Korea, Dem. Peop. Rep.	n.a.	n.a.	n.a.	70 3/	90 3/	110 3/	110 3/	120 3/	120 3/	n.a.	115
United Kingdom	160	91	85	122	97	69	137	52	84	61	81
Portugal	0	0	0	55 3/	55 3/	78 3/	75 3/	74 3/	65 3/	64 3/	71
Korea, Rep. of	11	19	0	29	36	47	53	78	64	n.a.	61
Bulgaria	44	45	51	54	50	46	50	54	55	55	52
Argentina	27	31	35	30	36	35	49	35	35	39	39
Chile	n.a.	n.a.	n.a.	8	4	6	5	5	5	5	5
Italy	4	5	3	3	6	3	3	5	1	1	3
Venezuela	0	0	0	0	0	0	2	4	4	n.a.	3
Zimbabwe	n.a.	n.a.	n.a.	2	2	2	2	2	2	1	2
German Dem. Rep. of	n.a.	2	3	0	0	4	0	0	2	2	2
Belgium	111	131	98	84	68	0	0	0	0	0	0
Sweden	16	0	0	0	0	0	0	0	0	0	0
Czechoslovakia	27	34	28	21	0	0	0	0	0	0	0
Hungary	18	0	0	0	0	0	0	0	0	0	0
Total	4 175	4 230	4 031	3 962	3 627	3 453	3 818	3 551	3 238	2 478 4/	3 308

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Table B.I.1.5.b. Production of ferro-manganese, by country, 1973-1981

Percentage of total world production 5/

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	5-year average (1978-1982) 2/
USSR	23.26	22.84	24.36	20.19	22.06	17.38	15.72	15.63	15.19	16.98
Japan	14.78	14.75	16.13	15.95	14.53	13.21	15.79	16.02	17.54	16.53
France	13.03	12.60	10.59	9.26	10.28	11.50	11.76	13.52	9.67	11.92
Norway	5.63	7.94	8.41	9.46	7.80	8.98	9.95	8.36	7.20	8.73
Germany, Fed. Rep. of	5.92	7.57	5.36	5.55	4.82	6.05	6.10	5.63	6.61	8.53
Canada	4.84	5.86	3.97	5.68	5.32	6.95	4.50	8.22	8.71	7.45
United States	14.85	11.68	12.95	11.06	8.35	7.15	7.54	4.84	5.40	5.99
India	4.24	4.61	4.94	4.44	5.32	6.37	4.90	4.56	6.45	5.91
Brazil	1.87	1.82	2.16	2.50	3.56	3.42	3.51	3.94	3.34	3.75
Poland	3.09	3.14	3.67	3.13	3.69	3.65	3.61	3.72	3.40	3.62
Spain	2.61	2.67	3.15	3.36	3.89	3.88	3.88	3.46	3.06	3.54
Korea, Dem. Peop. Rep.	n.a.	n.a.	n.a.	1.77	2.48	3.19	2.88	3.38	3.71	3.48
United Kingdom	3.83	2.15	2.11	3.08	2.67	2.00	3.59	1.46	2.59	2.44
Portugal	0.00	0.00	0.00	1.39	1.52	2.26	1.96	2.08	2.01	2.15
Korea, Rep. of	0.26	0.45	0.00	0.73	0.99	1.36	1.39	2.20	1.98	1.83
Bulgaria	1.05	1.06	1.27	1.36	1.38	1.33	1.31	1.52	1.70	1.57
Argentina	0.65	0.73	0.87	0.76	0.99	1.01	1.28	0.99	1.08	1.17
Chile	n.a.	n.a.	n.a.	0.20	0.11	0.17	0.13	0.14	0.15	0.16
Italy	0.10	0.12	0.07	0.08	0.17	0.09	0.08	0.14	0.03	0.08
Venezuela	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.11	0.12	0.08
Zimbabwe	n.a.	n.a.	n.a.	0.05	0.06	0.06	0.05	0.06	0.06	0.05
German Dem. Rep. of	n.a.	0.05	0.07	0.00	0.00	0.12	0.00	0.00	0.06	0.05
Belgium	2.66	3.10	2.43	2.12	1.87	0.00	0.00	0.00	0.00	0.00
Sweden	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czechoslovakia	0.65	0.80	0.69	0.53	0.00	0.00	0.00	0.00	0.00	0.00
Hungary	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(Source and footnotes on following page)

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(Source and footnotes to table)

Sources: 1973-1981 - United Nations, Department of International Economic and Social Affairs, Statistical Office of the United Nations, Yearbook of Industrial Statistics, 1981 Edition, Volume II, Commodity Production Data 1972-1981 (United Nations, New York, 1983). Copper, pp. 11-12; nickel, p. 13; cobalt, p. 27; manganese, pp. 20-21; ferro-manganese, p. 476.

1982 - United Nations Statistical Office data base. In some cases, the data base presents revised figures for 1973-1981; the revised figures have been used in the tables.

1/ The commodity descriptions are as follows:

Copper: Copper content of copper ores and concentrates and all other copper-bearing ores and concentrates intended for treatment for copper recovery (ISIC code 2302-01M)

Nickel: Nickel content of nickel ores and concentrates and all other nickel-bearing ores and concentrates intended for treatment for nickel recovery (ISIC code 2302-04M)

Cobalt: Cobalt content of cobalt ores and concentrates and all other cobalt-bearing ores and concentrates intended for treatment for cobalt recovery (ISIC code 2302-37M)

Manganese: Manganese content of manganese ores and concentrates and all other manganese-bearing ores and concentrates intended for treatment for manganese recovery (ISIC code 2302-19M)

Ferro-manganese: Ferro-alloy containing, by weight, more than 25 per cent manganese. The data in the table on ferro-manganese includes those on spiegeleisen, a ferrous product containing, by weight, at least 6 per cent but not more than 25 per cent manganese. Ferro-manganese and spiegelesen (ISIC code 3710-04)

2/ Average of the five years (1978-1982) when figures are available for all five years. In all other cases, average of years within the 1978-1982 period for which figures are available.

3/ Provisional or estimated figures.

4/ Sum of the figures that are available for 1982; this sum does not compare with the totals for earlier years.

5/ Percentages for 1982 have not been calculated because figures for total world production in 1982 are not available.

6/ Calculated by dividing the average amount over the period 1978-1982 of a particular country by the total of the last column with the heading "5-year average" in tables B.I.1-5.a, respectively.

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B.I.2. CONSUMPTION*

Table B.I.2.1.a. Consumption of refined copper, by country, 1973-1982

Amount of copper content

(Thousands of metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982)
United States	2 211.1	1 994.9	1 399.2	1 812.1	1 989.9	2 196.9	2 164.6	1 867.7	2 029.5	1 658.7	1 983.5
USSR 1/	1 100.0	1 100.0	1 220.0	1 250.0	1 290.0	1 330.0	1 360.0	1 300.0	1 320.0	1 340.0	1 330.0
Japan	1 201.8	880.9	827.4	1 050.3	1 127.1	1 241.4	1 330.1	1 158.3	1 254.1	1 243.1	1 245.4
Germany, Fed. Rep. of	727.2	731.0	634.6	744.6	779.9	780.0	794.1	747.8	747.5	730.7	760.0
United Kingdom	541.2	496.9	450.5	457.6	512.0	501.6	498.8	409.2	333.1	355.4	419.6
France	407.8	414.2	364.5	367.1	326.1	319.0	358.4	433.4	429.6	407.4	389.6
China 1/	270.0	280.0	300.0	320.0	330.0	350.0	360.0	370.0	370.0	400.0	370.0
Italy	295.0	308.0	290.0	322.0	326.0	344.0	352.0	388.0	366.0	342.0	358.4
Belgium/Luxembourg	164.4	178.2	177.4	228.1	295.4	289.5	303.1	303.9	260.0	277.1	286.7
Canada	231.0	248.0	185.2	206.2	222.2	250.1	243.3	208.6	241.6	148.9	218.5
Brazil	125.3	162.0	155.2	179.3	210.9	180.8	228.7	246.0	179.0	249.3	216.8
Poland	136.8	140.0	153.0	174.0	188.0	185.0	202.0	213.2	184.6	171.9	191.3
Yugoslavia	84.6	108.8	103.2	99.6	118.0	124.8	132.0	148.9	148.6	142.9	139.4
Australia	133.3	120.2	96.8	119.3	106.0	123.8	126.9	126.2	136.5	131.0	128.9
Spain	139.8	143.9	119.4	130.5	135.0	128.5	132.5	135.5	107.0	120.3	124.8
German Dem. Rep. of 1/	102.0	104.0	112.0	118.0	115.0	118.0	122.0	122.0	120.0	123.0	121.0
Mexico	66.0	66.0	70.8	82.3	79.6	83.5	103.9	122.6	135.2	88.4	106.7
Sweden	114.0	108.2	94.4	87.5	81.1	103.5	107.6	105.3	106.0	107.7	106.0
Korea, Rep. of	13.5	23.5	35.1	47.0	57.8	73.5	85.3	84.0	144.0	138.1	105.0
Czechoslovakia	64.8	75.0	80.8	85.1	81.1	79.8	82.6	88.6	92.5	90.0	86.7
Romania 1/	54.5	58.0	65.0	70.0	80.0	83.5	85.0	80.0	78.0	75.0	80.3
South Africa	62.7	66.8	65.3	56.7	52.2	60.3	69.3	89.9	89.5	80.6	77.9
India	62.9	46.5	24.4	50.8	52.9	73.7	67.9	77.2	75.1	83.2	75.4
Taiwan	28.0	28.6	26.2	35.4	48.2	44.5	70.3	84.5	91.7	73.9	73.0
Bulgaria	44.5	48.0	48.0	50.0	52.0	58.0	60.0	55.0	56.0	60.0	57.8
Finland	32.6	40.3	33.7	40.3	37.0	40.4	50.6	57.5	56.6	57.2	52.5
Argentina	35.5	44.6	38.6	44.7	32.2	33.0	59.6	52.5	50.3	51.5	49.4
Chile	34.2	29.4	26.8	46.3	48.4	51.6	49.0	42.9	39.0	32.8	43.1
Netherlands	38.2	37.7	37.0	49.2	46.6	31.6	27.0	34.4	31.6	29.2	30.8
Other Africa 2/	21.7	25.7	22.0	19.6	23.6	34.9	27.5	26.0	26.0 1/	26.0 1/	28.1
Turkey	13.5	15.4	16.2	18.0	22.0	26.0	22.1	33.4	25.1	32.4	27.8
Austria	38.9	42.3	34.4	34.2	34.7	19.2	17.7	30.8	22.6	29.3	23.9
Hungary	23.0	22.7	21.1	22.2	23.0	24.3	24.1	22.0	21.5	22.5	22.9
Greece	18.0	14.8	18.0	20.0	22.2	21.5	24.0	24.7	19.0	15.9	21.0
Other Asia 2/	15.6	14.4	12.7	15.6	18.4	18.8	13.3	19.7	30.0	22.5 1/	20.9
Peru	6.0	8.5	11.0	9.0	9.7	10.3	19.3	19.2	17.7	21.0	17.5
Portugal	11.2	13.7	13.5	13.7	17.4	16.4	11.5	18.4	16.5	14.2	15.4
Korea, North 1/	13.0	14.0	15.0	15.0	15.0	16.0	15.0	15.0	15.0	14.0	15.0
Switzerland	25.5	30.2	25.6	20.8	24.1	21.3	16.0	13.7	13.3	7.8	14.4
Other America 2/	2.7	3.4	3.9	5.8	10.5	16.4	13.3	12.4	12.0	12.0	13.2
Indonesia	0.1	0.3	0.5	0.2	n.a.	n.a.	4.7	12.0	14.7	17.6	12.3
Albania	3.5	3.6	3.6	5.0	5.5	6.0	6.0	7.0	7.5	8.0	6.9
Norway	6.0	5.6	5.3	6.4	5.4	6.1	6.3	6.2	6.3	6.4	6.3
Denmark	5.7	4.7	3.8	4.9	6.5	5.2	3.4	1.6	1.2	1.3	2.5
New Zealand	2.0	2.3	0.9	2.1	1.9	2.0	1.9	2.3	1.7	.7	1.7
Other Oceania 2/	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.6	n.a.	n.a.	1.6
Cuba	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.5	1.2
Viet Nam 1/	n.a.	n.a.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ireland	0.2	0.3	0.2	0.4	0.4	0.2	0.1	0.2	0.2	0.1	0.2
Total	8 740.3	8 306.5	7 444.2	8 538.9	9 062.9	9 526.9	9 854.8	9 421.5	9 525.1	9 063.5	9 482.1

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* For sources and notes, please refer to the end of section B.I.2.

Table B.I.2.1.b. Consumption of refined copper, by country, 1973-1982

Percentage of total world consumption

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average
United States	25.41	24.02	18.80	21.22	21.96	23.06	21.96	19.82	21.31	18.30	20.92
USSR	12.59	13.24	16.39	14.64	14.23	13.96	13.80	13.80	13.86	14.78	14.03
Japan	13.75	10.60	11.11	12.30	12.44	13.03	13.50	12.29	13.17	13.72	13.13
Germany, Fed. Rep. of	8.32	8.80	8.52	8.72	8.61	8.19	8.06	7.94	7.85	8.06	8.02
United Kingdom	6.19	5.98	6.05	5.36	5.65	5.27	5.06	4.34	3.50	3.92	4.43
France	4.67	4.99	4.90	4.30	3.60	3.35	3.64	4.60	4.51	4.49	4.11
China	3.09	3.37	4.03	3.75	3.64	3.67	3.65	3.93	3.88	4.41	3.90
Italy	3.38	3.71	3.90	3.77	3.60	3.61	3.57	4.12	3.84	3.77	3.78
Belgium/Luxembourg	1.88	2.15	2.38	2.67	3.26	3.04	3.08	3.23	2.73	3.06	3.02
Canada	2.64	2.99	2.49	2.41	2.45	2.63	2.47	2.21	2.54	1.64	2.30
Brazil	1.43	1.95	2.08	2.10	2.33	1.90	2.32	2.61	1.88	2.75	2.29
Poland	1.57	1.69	2.06	2.04	2.07	1.94	2.05	2.26	1.94	1.90	2.02
Yugoslavia	0.97	1.31	1.39	1.17	1.30	1.31	1.34	1.58	1.56	1.58	1.47
Australia	1.53	1.45	1.30	1.40	1.17	1.30	1.29	1.34	1.43	1.45	1.36
Spain	1.60	1.73	1.60	1.53	1.49	1.35	1.34	1.44	1.12	1.33	1.32
German Dem. Rep. of	1.17	1.25	1.50	1.38	1.27	1.24	1.24	1.29	1.26	1.36	1.28
Mexico	0.76	0.79	0.95	0.96	0.88	0.88	1.05	1.30	1.42	0.98	1.13
Sweden	1.30	1.30	1.27	1.02	0.89	1.09	1.09	1.12	1.11	1.19	1.12
Korea, Rep. of	0.15	0.28	0.47	0.55	0.64	0.77	0.87	0.89	1.51	1.52	1.11
Czechoslovakia	0.74	0.90	1.09	1.00	0.89	0.84	0.84	0.94	0.97	0.99	0.91
Romania	0.62	0.70	0.87	0.82	0.88	0.88	0.86	0.85	0.82	0.83	0.85
South Africa	0.72	0.80	0.88	0.66	0.58	0.63	0.70	0.95	0.94	0.89	0.82
India	0.72	0.56	0.33	0.59	0.58	0.77	0.69	0.82	0.79	0.92	0.80
Taiwan	0.32	0.34	0.35	0.41	0.53	0.47	0.71	0.90	0.96	0.82	0.77
Bulgaria	0.51	0.58	0.64	0.59	0.57	0.61	0.61	0.58	0.59	0.66	0.61
Finland	0.37	0.49	0.45	0.47	0.41	0.42	0.51	0.61	0.59	0.63	0.55
Argentina	0.41	0.54	0.52	0.52	0.36	0.35	0.60	0.56	0.53	0.57	0.52
Chile	0.39	0.35	0.36	0.54	0.53	0.54	0.50	0.46	0.41	0.36	0.45
Netherlands	0.44	0.45	0.50	0.58	0.51	0.33	0.27	0.37	0.33	0.32	0.32
Other Africa	0.25	0.31	0.30	0.23	0.26	0.37	0.28	0.28	0.27	0.29	0.30
Turkey	0.15	0.19	0.22	0.21	0.24	0.27	0.22	0.35	0.26	0.36	0.29
Austria	0.45	0.51	0.46	0.40	0.38	0.20	0.18	0.33	0.24	0.32	0.25
Hungary	0.26	0.27	0.28	0.26	0.25	0.26	0.24	0.23	0.23	0.25	0.24
Greece	0.21	0.18	0.24	0.23	0.24	0.23	0.24	0.26	0.20	0.18	0.22
Other Asia	0.18	0.17	0.17	0.18	0.20	0.20	0.13	0.21	0.31	0.25	0.22
Peru	0.07	0.10	0.15	0.11	0.11	0.11	0.20	0.20	0.19	0.23	0.18
Portugal	0.13	0.16	0.18	0.16	0.19	0.17	0.12	0.20	0.17	0.16	0.16
Korea, North	0.15	0.17	0.20	0.18	0.17	0.17	0.15	0.16	0.16	0.15	0.16
Switzerland	0.29	0.36	0.34	0.24	0.27	0.22	0.16	0.15	0.14	0.09	0.15
Other America	0.03	0.04	0.05	0.07	0.12	0.17	0.13	0.13	0.13	0.13	0.14
Indonesia	0.00	0.00	0.01	0.00	n.a.	n.a.	0.05	0.13	0.15	0.19	0.13
Albania	0.04	0.04	0.05	0.06	0.06	0.06	0.06	0.07	0.08	0.09	0.07
Norway	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.07
Denmark	0.07	0.06	0.05	0.06	0.07	0.05	0.03	0.02	0.01	0.01	0.03
New Zealand	0.02	0.03	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02
Other Oceania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.02	n.a.	n.a.	0.02
Cuba	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01
Viet Nam	n.a.	n.a.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ireland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table B.I.2.2.a. Consumption of refined nickel, 3/ by country, 1973-1982

Amount of nickel content

(Thousands of metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average (1978-1982)
United States	1 821	1 945	1 329	1 478	1 387	1 639	1 781	1 418	1 314	943	1 419
USSR 1/	1 000	1 050	1 150	1 210	1 250	1 275	1 300	1 300	1 300	1 380	1 311
Japan	1 136	1 159	833	1 150	973	990	1 320	1 220	1 050	1 067	1 129
Germany, Fed. Rep. of	548	612	428	564	536	664	765	676	620	578	661
France	296	405	319	335	358	355	389	384	336	318	356
United Kingdom	315	335	270	305	305	320	350	228	223	225	269
Italy	232	200	170	220	230	245	267	270	200	240	244
China 1/	180	180	180	180	180	190	190	180	190	190	188
Sweden	268	319	220	240	175	200	222	200	163	150	187
German Dem. Rep. of 1/	80	90	90	100	105	110	110	105	100	100	105
Canada	108	116	113	100	90	118	83	97	94	100	98
Czechoslovakia	70	80	88	117	104	89	96	97	100 1/	100 1/	96
Spain	53	62	50	64	82	88	92	86	68	79	83
India	15	28	33	35	56	60	65	70	95	110	80
Poland 1/	50	70	75	78	80	85	90	80	70	65	78
Brazil	53	66	39	47	52	65	79	112	75	57	78
Finland	4	5	5	11	28	53	70	93	73	95	77
Romania 1/	32	40	50	60	60	70	65	60	60	55	62
South Africa	50	60	55	40	47	47	50	56	60	60	55
Austria	53	52	43	42	54	55	50	54	44	45	50
Other Asia 1/ 2/	4	5	8	9	14	13	23	54	60	60	42
Australia	50	48	23	36	39	42	40	43	35	40	40
Belgium/Luxembourg	37	42	40	35	26	34	50	36	38	39	39
Mexico	8	7	30	52	25	27	23	26	33	30	28
Hungary 1/	15	18	20	22	22	23	25	25	25	28	25
Taiwan	15	16	2	10	14	16	15	25	30	28	23
Korea, Rep. of	n.a.	5	5	11	10	8	8	27	38	24	21
Yugoslavia	15	14	18	14	18	23	21	17	21	20 1/	20
Other America 1/ 2/	5	8	10	10	13	12	12	19	20	20	17
Bulgaria 1/	5	10	10	12	12	13	15	15	15	16	15
Switzerland	10	11	16	18	15	16	12	12	12	10	12
Netherlands	15	17	12	15	11	14	12	12	7	12	11
New Zealand	n.a.	n.a.	n.a.	4	4	11	8 1/	8 1/	8 1/	8 1/	9
Argentina	10	9	8	6	10 1/	8	8	6	4	4	6
Other centrally pl. 1/ 2/	5	5	5	5	5	5	5	6	6	6	6
Norway	9	10	9	7	4	3	4	3	3	12	5
Other Africa 1/ 2/	n.a.	n.a.	5	10	5	5	4	5	5	5	5
Turkey	3	1	1	4	3	3	2	3	1 1/	3	2
Greece	1	1	1	1	1	2	4	2 1/	1	2	2
Ireland	1	1	4	1	1	2	4	1 1/	1 1/	2 1/	2
Denmark	1	2	2	2	1	2	2	2	1	2	2
Portugal	2	3	3	3	1	1	2	1	2	2	2
Total	6 575	7 107	5 772	6 663	6 406	7 001	7 733	7 134	6 601	6 330	6 960

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Table B.I.2.2.b. Consumption of refined nickel, by country 1973-1982

Percentage of total world consumption

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	5-year average
United States	27.70	27.37	23.02	22.18	21.65	23.41	23.03	19.88	19.91	14.90	20.39
USSR	15.21	14.77	19.92	18.16	19.51	18.21	16.81	18.22	19.69	21.80	18.84
Japan	17.28	16.31	14.43	17.26	15.19	14.14	17.07	17.10	15.91	16.86	16.23
Germany, Fed. Rep. of	8.33	8.61	7.42	8.46	8.37	9.48	9.89	9.48	9.39	9.13	9.49
France	4.50	5.70	5.53	5.03	5.59	5.07	5.03	5.38	5.09	5.02	5.12
United Kingdom	4.79	4.71	4.68	4.58	4.76	4.57	4.53	3.20	3.38	3.55	3.87
Italy	3.53	2.81	2.95	3.30	3.59	3.50	3.45	3.78	3.03	3.79	3.51
China	2.74	2.53	3.12	2.70	2.81	2.71	2.46	2.52	2.88	3.00	2.70
Sweden	4.08	4.49	3.81	3.60	2.73	2.86	2.87	2.80	2.47	2.37	2.69
German Dem. Rep. of	1.22	1.27	1.56	1.50	1.64	1.57	1.42	1.47	1.51	1.58	1.51
Canada	1.64	1.63	1.96	1.50	1.40	1.69	1.07	1.36	1.42	1.58	1.41
Czechoslovakia	1.06	1.13	1.52	1.76	1.62	1.27	1.24	1.36	1.51	1.58	1.39
Spain	0.81	0.87	0.87	0.96	1.28	1.26	1.19	1.21	1.03	1.25	1.19
India	0.23	0.39	0.57	0.53	0.87	0.86	0.84	0.98	1.44	1.74	1.15
Poland	0.76	0.98	1.30	1.17	1.25	1.21	1.16	1.12	1.06	1.03	1.12
Brazil	0.81	0.93	0.68	0.71	0.81	0.93	1.02	1.57	1.14	0.90	1.11
Finland	0.06	0.07	0.09	0.17	0.44	0.76	0.91	1.30	1.11	1.50	1.10
Romania	0.49	0.56	0.87	0.90	0.94	1.00	0.84	0.84	0.91	0.87	0.89
South Africa	0.76	0.84	0.95	0.60	0.73	0.67	0.65	0.78	0.91	0.95	0.78
Austria	0.81	0.73	0.74	0.63	0.84	0.79	0.65	0.76	0.67	0.71	0.71
Other Asia	0.06	0.07	0.14	0.14	0.22	0.19	0.30	0.76	0.91	0.95	0.60
Australia	0.76	0.68	0.40	0.54	0.61	0.60	0.52	0.60	0.53	0.63	0.57
Belgium/Luxembourg	0.56	0.59	0.69	0.53	0.41	0.49	0.65	0.50	0.58	0.62	0.57
Mexico	0.12	0.10	0.52	0.78	0.39	0.39	0.30	0.36	0.50	0.47	0.40
Hungary	0.23	0.25	0.35	0.33	0.34	0.33	0.32	0.35	0.38	0.44	0.36
Taiwan	0.23	0.23	0.03	0.15	0.22	0.23	0.19	0.35	0.45	0.44	0.33
Korea, Rep. of	n.a.	0.07	0.09	0.17	0.16	0.11	0.10	0.38	0.58	0.38	0.30
Yugoslavia	0.23	0.20	0.31	0.21	0.28	0.33	0.27	0.24	0.32	0.32	0.29
Other America	0.08	0.11	0.17	0.15	0.20	0.17	0.16	0.27	0.30	0.32	0.24
Bulgaria	0.08	0.14	0.17	0.18	0.19	0.19	0.19	0.21	0.23	0.25	0.21
Switzerland	0.15	0.15	0.28	0.27	0.23	0.23	0.16	0.17	0.18	0.16	0.18
Netherlands	0.23	0.24	0.21	0.23	0.17	0.20	0.16	0.17	0.11	0.19	0.16
New Zealand	n.a.	n.a.	n.a.	0.06	0.06	0.16	0.10	0.11	0.12	0.13	0.12
Argentina	0.15	0.13	0.14	0.09	0.16	0.11	0.10	0.08	0.06	0.06	0.09
Other centrally pl.	0.08	0.07	0.09	0.08	0.08	0.07	0.06	0.08	0.09	0.09	0.08
Norway	0.14	0.14	0.16	0.11	0.06	0.04	0.05	0.04	0.05	0.19	0.07
Other Africa	n.a.	n.a.	0.09	0.15	0.08	0.07	0.05	0.07	0.08	0.08	0.07
Turkey	0.05	0.01	0.02	0.06	0.05	0.04	0.03	0.04	0.02	0.05	0.03
Greece	0.02	0.01	0.02	0.02	0.02	0.03	0.05	0.03	0.02	0.03	0.03
Ireland	0.02	0.01	0.07	0.02	0.02	0.03	0.05	0.01	0.02	0.03	0.03
Denmark	0.02	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.03	0.03
Portugal	0.03	0.04	0.05	0.05	0.02	0.01	0.03	0.01	0.03	0.03	0.02
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.2.3.a. Consumption of cobalt, by country, 1973-1981

Amount of cobalt content
(metric tons)

Country 4/	1973	1974	1975	1976	1977	1978	1979	1980	1981	4-year average (1973-1976)
United States 5/	9 989	10 749	6 376	8 982	8 304	9 235	8 528	7 734	5 683	9 024
USSR	4 100	4 250	4 400	4 500	-	-	-	-	-	4 313
Japan	4 574	3 372	2 148	3 516	n.a.	2 268	n.a.	1 905	n.a.	3 403
United Kingdom	2 387	3 677	2 772	1 503	-	-	-	-	-	2 585
Germany, Fed. Rep. of	2 328	2 510	1 798	2 261	-	-	-	-	-	2 224
France	1 314	1 693	1 495	1 168 1/	-	-	-	-	-	1 418
China	900	950	1 000	1 000	-	-	-	-	-	963
Italy	560	738	469	368	-	-	-	-	-	534
Sweden	395	564	553	600	-	-	-	-	-	528
Poland	420	440	450	470	-	-	-	-	-	445
Netherlands	397	424	282	424	-	-	-	-	-	382
Czechoslovakia	320	340	350	360	-	-	-	-	-	343
German Dem. Rep.	300	270	285	295	-	-	-	-	-	288
Austria 1/	298	324	235	274	-	-	-	-	-	283
Brazil	281	252	260	290	-	-	-	-	-	271
Spain 1/	240	260	180	300	-	-	-	-	-	245
India	191	214	235	268	-	-	-	-	-	227
Belgium/ Luxembourg	190	200	140	150	-	-	-	-	-	170
Canada	196	185	123	160	n.a.	136	n.a.	104	n.a.	166
Australia	160	246	105	83	-	-	-	-	-	149
Mexico	138	146	140	160	-	-	-	-	-	146
Switzerland 1/	131	133	95	123	-	-	-	-	-	121
Bulgaria	115	110	115	120	-	-	-	-	-	115
Argentina	104	131	92	120	-	-	-	-	-	112
Romania	80	90	95	105	-	-	-	-	-	93
South Africa 1/	82	85	96	105	-	-	-	-	-	92
Thailand	158	20 1/	60 1/	60 1/	-	-	-	-	-	75
Hungary	60	70	75	75	-	-	-	-	-	70
Yugoslavia	59	66	54	97	-	-	-	-	-	69
Ireland	66 1/	63	49	33	-	-	-	-	-	53
Taiwan 1/	50	45	40	50	-	-	-	-	-	46
Finland	45	46	45	46	-	-	-	-	-	46
Portugal	36	30	33	36	-	-	-	-	-	34
Hong Kong	34	25 1/	25 1/	39 1/	-	-	-	-	-	31
Denmark	21	24	18	29	-	-	-	-	-	23
Norway 1/	15	15	15	14	-	-	-	-	-	15
Turkey	12	12 1/	12 1/	12 1/	-	-	-	-	-	12
Korea, Rep. of	5	10 1/	10 1/	10 1/	-	-	-	-	-	9
World total less United States 6/	20 762	22 030	18 349	19 224	14 059	24 655	n.a.	n.a.	11 338	20 091
World total	30 751	32 779	24 725	28 206	22 363	33 890	n.a.	n.a.	17 021	29 115

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Table B.I.2.3.b. Consumption of cobalt, by country, 1973-1981

Percentage of total world consumption

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	4-year average (1973-1976)
United States	32.48	32.79	25.79	31.84	-	-	-	-	-	30.99
USSR	13.33	12.97	17.80	15.95	-	-	-	-	-	14.81
Japan	14.87	10.29	8.69	12.47	-	-	-	-	-	11.69
United Kingdom	7.76	11.22	11.21	5.33	-	-	-	-	-	8.88
Germany, Fed. Rep. of	7.57	7.66	7.27	8.02	-	-	-	-	-	7.64
France	4.27	5.16	6.05	4.14	-	-	-	-	-	4.87
China	2.93	2.90	4.04	3.55	-	-	-	-	-	3.31
Italy	1.82	2.25	1.90	1.30	-	-	-	-	-	1.83
Sweden	1.28	1.72	2.24	2.13	-	-	-	-	-	1.81
Poland	1.37	1.34	1.82	1.67	-	-	-	-	-	1.53
Netherlands	1.29	1.29	1.14	1.50	-	-	-	-	-	1.31
Czechoslovakia	1.04	1.04	1.42	1.28	-	-	-	-	-	1.18
German Dem. Rep.	0.98	0.82	1.15	1.05	-	-	-	-	-	0.99
Austria	0.97	0.99	0.95	0.97	-	-	-	-	-	0.97
Brazil	0.91	0.77	1.05	1.03	-	-	-	-	-	0.93
Spain	0.78	0.79	0.73	1.06	-	-	-	-	-	0.84
India	0.62	0.65	0.95	0.95	-	-	-	-	-	0.78
Belgium/ Luxembourg	0.62	0.61	0.57	0.53	-	-	-	-	-	0.58
Canada	0.64	0.56	0.50	0.57	-	-	-	-	-	0.57
Australia	0.52	0.75	0.42	0.29	-	-	-	-	-	0.51
Mexico	0.45	0.45	0.57	0.57	-	-	-	-	-	0.50
Switzerland	0.43	0.41	0.38	0.44	-	-	-	-	-	0.41
Bulgaria	0.37	0.34	0.47	0.43	-	-	-	-	-	0.39
Argentina	0.34	0.40	0.37	0.43	-	-	-	-	-	0.38
Romania	0.26	0.27	0.38	0.37	-	-	-	-	-	0.32
Thailand	0.51	0.06	0.24	0.21	-	-	-	-	-	0.26
Hungary	0.20	0.21	0.30	0.27	-	-	-	-	-	0.24
Yugoslavia	0.19	0.20	0.22	0.34	-	-	-	-	-	0.24
Ireland	0.21	0.19	0.20	0.12	-	-	-	-	-	0.18
Taiwan	0.16	0.14	0.16	0.18	-	-	-	-	-	0.16
Finland	0.15	0.14	0.18	0.16	-	-	-	-	-	0.16
Portugal	0.12	0.09	0.13	0.13	-	-	-	-	-	0.12
Hong Kong	0.11	0.08	0.10	0.14	-	-	-	-	-	0.11
Denmark	0.07	0.07	0.07	0.10	-	-	-	-	-	0.08
Norway	0.05	0.05	0.06	0.05	-	-	-	-	-	0.05
Turkey	0.04	0.04	0.05	0.04	-	-	-	-	-	0.04
Korea, Rep. of	0.02	0.03	0.04	0.04	-	-	-	-	-	0.03
World total less United States	67.52	67.21	74.21	68.16	-	-	-	-	-	69.01
World total	100.00	100.00	100.00	100.00	-	-	-	-	-	100.00

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Table B.I.2.4.a. Consumption 7/ of manganese ore, by country, 1970-1981

Amount (actual weight)

(Thousands of metric tons)

Country	1970	1975	1978	1981	Average 8/
Socialist countries of Eastern Europe	6 909	9 106	9 216	9 352	8 646
Developing countries	396	2 023	2 355	3 044 1/	1 955
South Africa	913	2 337	1 741	2 606	1 899
Japan	2 860	4 047	2 109	2 562	2 895
EEC of Nine	2 912	2 939	2 498	2 300	2 662
United States	1 895	1 638	594	460	1 147
Australia	121	313	389	394 1/	304
Other developed market economies	1 223	1 686	1 577	1 183	1 417
World total 9/	17 229	24 089	20 479	21 901 1/	20 925

Table B.I.2.4.b Consumption 7/ of manganese ore, by country, 1970-1981

Percentage of total world consumption

Country	1970	1975	1978	1981	Average 8/
Socialist countries of Eastern Europe	40.10	37.80	45.00	42.70	41.32
Developing countries	2.30	8.40	11.50	13.90	9.34
South Africa	5.30	9.70	8.50	11.90	9.08
Japan	16.60	16.80	10.30	11.70	13.83
EEC of Nine	16.90	12.20	12.20	10.50	12.72
United States	11.00	6.80	2.90	2.10	5.48
Australia	0.70	1.30	1.90	1.80	1.45
Other developed market economies	7.10	7.00	7.70	5.40	6.77
World total 9/	100.00	100.00	100.00	100.00	100.00

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Table P.I.2.5.a. Consumption 7/ of ferro-manganese, by country, 1970-1981

Amount of ferro-manganese content

(Thousands of metric tons)

Country	1970	1975	1978	1981	Average 8/
Socialist countries of Eastern Europe	1 104	1 324	1 094	1 722	1 311
Developing countries	223	358	405	624	403
United States	1 001	853	851	726	858
Japan	481	523	450	572	507
South Africa	26	127	128	378	165
Germany, Fed. Rep. of	374	330	318	271	323
Italy	133	193	169	179	169
United Kingdom	228	179	153	138	175
France	211	174	99	11/	161
Norway	4	80	8	61	38
Australia	10/	75	10/	82	79
Spain	10/	108	10/	66	87
Other developed market economies	511	386	454	291	411
World total 9/	4 296	4 710	4 129	5 110	4 561

Table P.I.2.5.b. Consumption 7/ of ferro-manganese, by country, 1970-1981

Percentage of total world consumption
(Thousands of metric tons)

Country	1970	1975	1978	1981	Average 8/
Socialist countries of Eastern Europe	25.70	28.11	26.50	33.70	28.74
Developing countries	5.19	7.60	9.81	12.21	8.82
United States	23.30	18.11	20.61	14.21	18.81
Japan	11.20	11.10	10.90	11.19	11.10
South Africa	0.61	2.70	3.10	7.40	3.61
Germany, Fed. Rep. of	8.71	7.01	7.70	5.30	7.09
Italy	3.10	4.10	4.09	3.50	3.69
United Kingdom	5.31	3.80	3.71	2.70	3.83
France	4.91	3.69	2.40	11/	3.54
Norway	0.09	1.70	0.19	1.19	0.84
Australia	10/	1.59	10/	1.60	1.72
Spain	10/	2.29	10/	1.29	1.91
Other developed market economies	11.89	8.20	11.00	5.69	9.00
World total 9/	100.00	100.00	100.00	100.00	100.00

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Sources: Copper, nickel - Metallgesellschaft AG, Metal Statistics 1972-1982 (Frankfurt Am Main, 1984), pp. 34-35 and 58-59 respectively.

Cobalt, 1973-1976 - Federal Institute for Earth Sciences and Raw Materials, Hanover and German Institute for Economic Research, Berlin, Cobalt: A Research Report Compiled in the German Federal Republic (Miller Freeman Publications, Inc., San Francisco, 1979), p. 140, (English Language edition, edited and annotated by Robert J. M. Wyllie); 1977-1981 - United States Department of the Interior, Bureau of Mines, Mineral Facts and Problems 1980 and Mineral Commodity Profiles, 1979, 1983 Cobalt.

Manganese and ferro-mangenese - United Nations Conference on Trade and Development, Trade and Development Board, "The processing and marketing of manganese: areas for international co-operation, Report by the UNCTAD Secretariat", (TD/B/C.1/PSC/20 and PSC/20/Rev.1, annex, pp. 1-2). Calculated by multiplying the world total with the percentages of world total, given in the sources.

Notes

1/ Estimates.

2/ The region/country group excluding the countries in the region/country group mentioned in the column. In the case of "Other Asia" excluding centrally planned economies.

3/ Including nickel content in ferro-nickel and nickel oxide sinter, excluding consumption of nickel chemicals.

4/ Ranked in descending order of 4-year average (1973-1976).

5/ Figures for 1973-1976 in the German source are comparable to those given in the United States sources and seem to be obtained from the latter sources.

6/ Figures for 1973-1976 are calculated by subtracting those for United States from the world total.

7/ Apparent demand (production + import - exports); no attempt is made to estimate changes in stock levels.

8/ Average of four years - 1970, 1975, 1978 and 1981.

9/ Excluding socialist countries of Asia.

10/ Included in "Other developed market economies".

11/ Stock removals in excess of apparent demand.

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B.I.3. EXPORTS*

Table B.I.3.1.a. Exports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981 F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Philippines	268 177	250 808	440 637	546 197	591 539	419 472
Papua New Guinea	-	294 090	404 254	514 439	421 791	408 644
Canada	-	236 064	415 756	447 625	362 133	365 395
United States	-	19 816	66 155	203 375	207 012	124 090
Mexico	-	374	11 412	-	293 164	101 650
Chile	-	50 150	162 044	-	73 603	95 266
Indonesia	-	58 819	74 536	125 783	-	86 379
Australia	-	20 498	78 333	114 633	70 898	71 091
Malaysia	-	40 436	61 447	81 463	53	45 850
Peru	18 643	58 112	47 587	30 635	44 521	39 900
Zaire	-	13 848	43 618	58 846	16 432	33 186
South Africa	-	14 831	32 659	43 618	-	30 369
Norway	19 446	18 511	27 695	33 114	28 542	25 462
Yugoslavia	-	-	47 347	3 220	-	25 284
Iran (Islamic Republic of)	-	17 697	14 212	4 935	-	12 281
Morocco	4 272	3 147	10 524	15 814	17 577	10 267
Sweden	9 158	3 811	15 821	4 680	13 253	9 345
Ireland	3 514	4 933	8 392	8 747	5 623	6 242
Spain	-	376	315	453	21 694	5 710
Bolivia	3 885	3 945	8 629	2 983	1 502	4 189
India	-	-	8 529	2 764	6	3 766
Mauritania	-	4 559	2 346	-	-	3 453
Cyprus	4 564	3 914	2 805	299	-	2 896
Guatemala	-	549	5 324	2 509	-	2 794
Brazil	-	330	-	3 427	3 832	2 530
France	-	967	2 236	5 111	1 470	2 446
Colombia	-	796	2 270	2 673	990	1 682
Italy	626	811	990	3 136	1 814	1 475
Cuba	-	1 388	-	-	-	1 388
Saudi Arabia	1 236	1 947	3 024	225	306	1 348
Ecuador	-	39	558	1 837	2 492	1 232
Belgium/ Luxembourg	-	1 820	1 452	1 499	134	1 226
Zambia	-	0	1 785	-	170	652
Congo	76	1 408	51	-	562	524
Portugal	-	-	429	841	19	430
Burma	-	347	-	-	-	347
Germany, Fed. Rep. of	-	125	172	918	143	340
Switzerland	188	-	230	270	632	330
Mozambique	-	215	-	-	-	215
Algeria	211	100	425	84	-	205

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Table B.I.3.1.a. (continued)

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
New Caledonia	167	75	157	226	184	162
Fr. Polynesia	135	-	144	-	60	113
United Kingdom	-	152	9	23	249	108
Finland	17	-	-	127	33	59
Kuwait	-	-	52	-	-	52
Kenya	-	-	-	46	-	46
Nicaragua	-	71	10	-	-	41
New Zealand	-	40	-	-	-	40
Netherlands	-	44	43	1	-	29
Austria	-	24	54	5	20	26
Total	334 315	1 129 919	2 004 371	2 266 575	2 182 433	1 583 523

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* For sources and notes, please refer to the end of section B.I.4.

Table B.I.3.1.b. Exports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Philippines	80.22	22.20	21.98	24.10	27.10	26.49
Papua New Guinea	0.00	26.03	20.17	22.70	19.33	25.81
Canada	0.00	20.89	20.74	19.75	16.59	23.07
United States	0.00	1.75	3.30	8.97	9.49	7.84
Mexico	0.00	0.03	0.57	0.00	13.43	6.42
Chile	0.00	4.44	8.08	0.00	3.37	6.02
Indonesia	0.00	5.21	3.72	5.55	0.00	5,45
Australia	0.00	1.81	3.91	5.06	3.25	4.49
Malaysia	0.00	3.58	3.07	3.59	0.00	2.90
Peru	5.58	5.14	2.37	1.35	2.04	2.52
Zaire	0.00	1.23	2.18	2.60	0.75	2.10
South Africa	0.00	1.31	1.63	1.92	0.00	1.92
Norway	5.82	1.64	1.38	1.46	1.31	1.61
Yugoslavia	0.00	0.00	2.36	0.14	0.00	1.60
Iran (Islamic Republic of)	0.00	1.57	0.71	0.22	0.00	0.78
Morocco	1.28	0.28	0.53	0.70	0.81	0.65
Sweden	2.74	0.34	0.79	0.21	0.61	0.59
Ireland	1.05	0.44	0.42	0.39	0.26	0.39
Spain	0.00	0.03	0.02	0.02	0.99	0.36
Bolivia	1.16	0.35	0.43	0.13	0.07	0.26
India	0.00	0.00	0.43	0.12	0.00	0.24
Mauritania	0.00	0.40	0.12	0.00	0.00	0.22
Cyprus	1.37	0.35	0.14	0.01	0.00	0.18
Guatemala	0.00	0.05	0.27	0.11	0.00	0.18
Brazil	0.00	0.03	0.00	0.15	0.18	0.16
France	0.00	0.09	0.11	0.23	0.07	0.15
Colombia	0.00	0.07	0.11	0.12	0.05	0.11
Italy	0.19	0.07	0.05	0.14	0.08	0.09
Cuba	0.00	0.12	0.00	0.00	0.00	0.09
Saudi Arabia	0.37	0.17	0.15	0.01	0.01	0.09
Ecuador	0.00	0.00	0.03	0.08	0.11	0.08
Belgium/ Luxembourg	0.00	0.16	0.07	0.07	0.01	0.08
Zambia	0.00	0.00	0.09	0.00	0.01	0.04
Congo	0.02	0.12	0.00	0.00	0.03	0.03
Portugal	0.00	0.00	0.02	0.04	0.00	0.03
Burma	0.00	0.03	0.00	0.00	0.00	0.02
Germany, Fed. Rep. of	0.00	0.01	0.01	0.04	0.01	0.02
Switzerland	0.06	0.00	0.01	0.01	0.03	0.02
Mozambique	0.00	0.02	0.00	0.00	0.00	0.01

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Table B.I.3.1.b (continued)

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Algeria	0.06	0.01	0.02	0.00	0.00	0.01
New Caledonia	0.05	0.01	0.01	0.01	0.01	0.01
Fr. Polynesia	0.04	0.00	0.01	0.00	0.00	0.01
United Kingdom	0.00	0.01	0.00	0.00	0.01	0.01
Finland	0.01	0.00	0.00	0.01	0.00	0.00
Kuwait	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	0.00	0.00	0.00	0.00	0.00	0.00
Nicaragua	0.00	0.01	0.00	0.00	0.00	0.00
New Zealand	0.00	0.00	0.00	0.00	0.00	0.00
Netherlands	0.00	0.00	0.00	0.00	0.00	0.00
Austria	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table B.I.3.2.a. Exports of copper waste and scrap, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
United States	101 896	149 331	211 177	269 651	193 038	185 019
France	95 524	98 013	144 949	162 584	138 903	127 995
United Kingdom	36 442	46 223	87 692	144 508	151 000	93 173
Netherlands	37 603	44 911	79 196	96 603	75 284	66 719
Germany Fed. Rep. of	44 747	53 986	65 216	90 281	71 898	65 226
Canada	34 673	34 408	52 119	66 031	53 988	48 244
Belgium/ Luxembourg	17 065	21 188	36 871	39 266	28 768	28 632
Italy	11 442	9 567	23 136	16 805	33 267	18 843
Singapore	8 784	11 190	19 958	23 484	20 722	16 828
Hong Kong	8 857	10 318	17 199	23 586	23 916	16 775
Denmark	10 159	11 707	16 390	21 786	15 762	15 161
Switzerland	7 570	5 283	17 845	21 043	16 607	13 670
Malaysia	1 260	2 917	6 385	8 203	22 683	8 290
Ireland	5 449	5 986	8 690	9 241	8 830	7 639
Yugoslavia	8	3 912	11 249	11 250	7 562	6 796
Kuwait	1 837	4 483	10 621	7 321	4 729	5 798
United Arab Emirates	-	2 196	4 331	5 369	3 068	3 741
Austria	853	2 258	3 514	5 178	5 998	3 560
Norway	1 752	2 747	4 447	4 637	3 591	3 435
Israel	2 202	1 846	2 417	3 364	1 940	2 354
Lebanon	1 327	1 011	1 365	4 010	3 246	2 192
Algeria	3 286	1 487	1 564	1 685	1 676	1 940
Mexico	-	2 724	1 649	1 482	1 485	1 835
Nigeria	286	321	68	5 154	3 344	1 835
Morocco	903	1 404	2 640	2 239	914	1 620
Zambia	3	6 445	146	196	353	1 429
Philippines	704	2 183	1 192	2 818	88	1 397
Chile	67	2 778	1 283	-	991	1 280
Saudi Arabia	69	275	1 439	1 445	2 928	1 231
Ivory Coast	630	949	1 691	1 172	1 494	1 187
Spain	1 482	765	1 083	1 516	293	1 028
Greece	951	556	177	1 283	2 168	1 027
Neth. Antilles	624	551	603	588	2 508	975
Australia	929	513	1 103	1 626	659	966
Tunisia	418	336	749	1 119	1 892	903
Cuba	673	2 252	656	672	252	901
Sweden	547	236	733	2 052	730	860
Ghana	62	93	1 141	1 822	1 078	839
South Africa	813	819	983	393	-	752
Senegal	543	599	820	954	692	722
Libyan Arab Jamahiriya	-	117	838	1 104	815	719
Iraq	486	1 122	955	652	260	695

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Table B.I 3.2.a (continued)

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
New Zealand	170	431	694	792	664	550
Malta	499	335	663	597	574	534
Jordan	-	-	954	512	5	490
Korea, Rep. of	133	216	757	904	403	483
Benin	63	40	681	1 060	518	472
Japan	458	511	277	668	175	418
Panama	151	172	736	660	248	393
Zaire	201	196	855	456	199	381
Total	444 249	551 539	850 306	1 068 706	911 759	765 312

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Table B.I.3.2.b. Exports of copper waste and scrap, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
United States	22.94	27.08	24.84	25.23	21.17	24.18
France	21.50	17.77	17.05	15.21	15.23	16.72
United Kingdom	8.20	8.38	10.31	13.52	16.56	12.17
Netherlands	8.46	8.14	9.31	9.04	8.26	8.72
Germany, Fed. Rep. of	10.07	9.79	7.67	8.45	7.89	8.52
Canada	7.80	6.24	6.13	6.18	5.92	6.30
Belgium/Luxembourg	3.84	3.84	4.34	3.67	3.16	3.74
Italy	2.58	1.73	2.72	1.57	3.65	2.46
Singapore	1.98	2.03	2.35	2.20	2.27	2.20
Hong Kong	1.99	1.87	2.02	2.21	2.62	2.19
Denmark	2.29	2.12	1.93	2.04	1.73	1.98
Switzerland	1.70	0.96	2.10	1.97	1.82	1.79
Malaysia	0.28	0.53	0.75	0.77	2.49	1.08
Ireland	1.23	1.09	1.02	0.86	0.97	1.00
Yugoslavia	0.00	0.71	1.32	1.05	0.83	0.89
Kuwait	0.41	0.81	1.25	0.69	0.52	0.76
United Arab Emirates	0.00	0.40	0.51	0.50	0.34	0.49
Austria	0.19	0.41	0.41	0.48	0.66	0.47
Norway	0.39	0.50	0.52	0.43	0.39	0.45
Israel	0.50	0.33	0.28	0.31	0.21	0.31
Lebanon	0.30	0.18	0.16	0.38	0.36	0.29
Algeria	0.74	0.27	0.18	0.16	0.18	0.25
Mexico	0.00	0.49	0.19	0.14	0.16	0.24
Nigeria	0.06	0.06	0.01	0.48	0.37	0.24
Morocco	0.20	0.25	0.31	0.21	0.10	0.21
Zambia	0.00	1.17	0.02	0.02	0.04	0.19
Philippines	0.16	0.40	0.14	0.26	0.01	0.18
Chile	0.02	0.50	0.15	0.00	0.11	0.17
Saudi Arabia	0.02	0.05	0.17	0.14	0.32	0.16
Ivory Coast	0.14	0.17	0.20	0.11	0.16	0.16
Spain	0.33	0.14	0.13	0.14	0.03	0.13
Greece	0.21	0.10	0.02	0.12	0.24	0.13
Neth. Antilles	0.14	0.10	0.07	0.06	0.28	0.13
Australia	0.21	0.09	0.13	0.15	0.07	0.13
Tunisia	0.09	0.06	0.09	0.10	0.21	0.12
Cuba	0.15	0.41	0.08	0.06	0.03	0.12
Sweden	0.12	0.04	0.09	0.19	0.08	0.11
Ghana	0.01	0.02	0.13	0.17	0.12	0.11
South Africa	0.18	0.15	0.12	0.04	0.00	0.10
Senegal	0.12	0.11	0.10	0.09	0.08	0.09
Libyan Arab Jamahiriya	0.00	0.02	0.10	0.10	0.09	0.09
Iraq	0.11	0.20	0.11	0.06	0.03	0.09
New Zealand	0.04	0.08	0.08	0.07	0.07	0.07
Malta	0.11	0.06	0.08	0.06	0.06	0.07
Jordan	0.00	0.00	0.11	0.05	0.00	0.06
Korea, Rep. of	0.03	0.04	0.09	0.08	0.04	0.06
Benin	0.01	0.01	0.08	0.10	0.06	0.06
Japan	0.10	0.09	0.03	0.06	0.02	0.05
Panama	0.03	0.03	0.09	0.06	0.03	0.05
Zaire	0.05	0.04	0.10	0.04	0.02	0.05
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.3.a. Exports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Chile	972 576	1 100 416	1 681 784	2 065 503	1 732 276	1 510 511
Zambia	810 662	731 603	1 051 230	1 136 558	745 428	895 096
Belgium/Luxembourg	456 920	431 958	579 973	698 855	538 681	541 277
Peru	352 455	332 443	640 648	593 639	567 709	497 379
Canada	404 714	332 100	400 769	738 129	473 696	469 882
Zaire	433 448	313 797	470 115	559 258	225 963	400 516
South Africa	221 168	223 792	284 965	313 081	-	260 752
Germany, Fed. Rep. of	153 979	221 339	249 392	277 428	172 340	214 896
Japan	62 728	73 600	106 283	508 758	80 714	166 417
Australia	114 378	88 810	148 415	157 409	167 588	135 320
United States	97 935	160 676	159 034	61 284	126 287	121 043
United Kingdom	60 734	55 300	93 242	144 453	135 364	97 819
Spain	65 872	69 370	63 837	141 903	128 212	93 839
Sweden	52 508	42 483	65 539	48 269	77 257	57 211
Norway	34 448	26 809	52 304	72 698	51 194	47 491
France	24 235	36 179	52 863	44 878	41 144	39 860
Finland	48 521	24 001	32 525	24 693	48 127	35 573
Zimbabwe	46 894	39 138	53 304	36 028	62	34 850
Austria	18 253	26 143	40 293	43 299	42 478	34 093
Yugoslavia	23 392	20 875	14 904	29 404	23 869	22 489
Tanzania, United Rep. of	-	8 655	9 196	12 917	13 739	11 127
Switzerland	8 473	7 852	17 560	13 532	7 282	10 940
Mexico	29 876	5 454	4 543	6 216	7 023	10 622
Netherlands	6 795	6 088	8 485	11 052	19 538	10 392
Italy	6 063	4 421	9 292	9 400	13 789	8 593
Korea, Rep. of	0	-	-	10 945	6 261	5 735
Uganda	1 053	1 535	25 252	150	172	5 632
Cook Islands	-	-	-	5 383	-	5 383
Portugal	50	1 504	6 623	3 102	2 385	2 733
Mauritania	-	2 163	-	-	-	2 163
Yemen	-	-	2 843	2 169	1 257	2 090
Denmark	1 215	997	1 935	1 768	1 908	1 565
Gambia	-	-	1 223	-	-	1 223
Venezuela	-	899	-	-	-	899
Sierra Leone	-	662	-	-	-	662
Bolivia	-	45	1 191	698	610	636
Iraq	-	-	1 599	155	49	601
Ireland	561	395	417	689	666	546
Jordan	752	200	1 041	340	390	545
Burundi	-	33	-	808	741	527
Israel	525	150	133	596	533	387
Argentina	2	1	218	1 101	392	343
Lebanon	804	228	112	307	87	308
Angola	66	240	371	-	-	226
Hong Kong	126	117	260	302	285	218
New Zealand	577	309	23	27	33	194
Greece	137	363	84	206	3	159
Brazil	3	0	105	510	10	126
Tunisia	48	1	315	0	-	91
Saudi Arabia	13	26	90	163	156	90
Total	4 512 959	4 393 172	6 334 330	7 742 035	5 455 698	5 687 639

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Table B.I.3.3.b. Exports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Chile	21.55	25.05	26.55	26.68	31.75	26.56
Zambia	17.96	16.65	16.60	14.68	13.66	15.74
Belgium/Luxembourg	10.12	9.83	9.16	9.03	9.87	9.52
Peru	7.81	7.57	10.11	7.67	10.41	8.74
Canada	8.97	7.56	6.33	9.53	8.68	8.26
Zaire	9.60	7.14	7.42	7.22	4.14	7.04
South Africa	4.90	5.09	4.50	4.04	0.00	4.58
Germany, Fed. Rep. of	3.41	5.04	3.94	3.58	3.16	3.78
Japan	1.39	1.68	1.68	6.57	1.48	2.93
Australia	2.53	2.02	2.34	2.03	3.07	2.38
United States	2.17	3.66	2.51	0.79	2.31	2.13
United Kingdom	1.35	1.26	1.47	1.87	2.48	1.72
Spain	1.46	1.58	1.01	1.83	2.35	1.65
Sweden	1.16	0.97	1.03	0.62	1.42	1.01
Norway	0.76	0.61	0.83	0.94	0.94	0.83
France	0.54	0.82	0.83	0.58	0.75	0.70
Finland	1.08	0.55	0.51	0.32	0.88	0.63
Zimbabwe	1.04	0.89	0.84	VALUE	0.00	0.61
Austria	0.40	0.60	0.64	0.56	0.78	0.60
Yugoslovia	0.52	0.48	0.24	0.38	0.44	0.40
Tanzania, United Rep. of	0.00	0.20	0.15	0.17	0.25	0.20
Switzerland	0.19	0.18	0.28	0.17	0.13	0.19
Mexico	0.66	0.12	0.07	0.08	0.13	0.19
Netherlands	0.15	0.14	0.13	0.14	0.36	0.18
Italy	0.13	0.10	0.15	0.12	0.25	0.15
Korea, Rep. of	0.00	0.00	0.00	0.14	0.11	0.10
Uganda	0.02	0.03	0.40	0.00	0.00	0.10
Cook Islands	0.00	0.00	0.00	0.07	0.00	0.09
Portugal	0.00	0.03	0.10	0.04	0.04	0.05
Mauritania	0.00	0.05	0.00	0.00	0.00	0.04
Yemen	0.00	0.00	0.04	0.03	0.02	0.04
Denmark	0.03	0.02	0.03	0.02	0.03	0.03
Gambia	0.00	0.00	0.02	0.00	0.00	0.02
Venezuela	0.00	0.02	0.00	0.00	0.00	0.02
Sierra Leone	0.00	0.02	0.00	0.00	0.00	0.01
Bolivia	0.00	0.00	0.02	0.01	0.01	0.01
Iraq	0.00	0.00	0.03	0.00	0.00	0.01
Ireland	0.01	0.01	0.01	0.01	0.01	0.01
Jordan	0.02	0.00	0.02	0.00	0.01	0.01
Burundi	0.00	0.00	0.00	0.01	0.01	0.01
Israel	0.01	0.00	0.00	0.01	0.01	0.01
Argentina	0.00	0.00	0.00	0.01	0.01	0.01
Lebanon	0.02	0.01	0.00	0.00	0.00	0.01
Angola	0.00	0.01	0.01	0.00	0.00	0.00
Hong Kong	0.00	0.00	0.00	0.00	0.01	0.00
New Zealand	0.01	0.01	0.00	0.00	0.00	0.00
Greece	0.00	0.01	0.00	0.00	0.00	0.00
Brazil	0.00	0.00	0.00	0.01	0.00	0.00
Tunisia	0.00	0.00	0.00	0.00	0.00	0.00
Saudi Arabia	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.4.a. Exports of copper and copper alloys, worked, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Germany, Fed. Rep. of	583 269	762 408	1 052 113	1 186 537	1 054 498	927 765
Belgium/Luxembourg	448 120	481 311	647 706	739 289	516 165	566 518
Japan	353 396	410 254	484 415	603 419	556 701	481 637
France	215 855	248 579	416 956	607 336	551 263	407 998
United Kingdom	287 316	298 411	369 201	447 315	400 792	360 607
United States	117 307	160 897	278 085	395 939	326 655	255 777
Italy	118 027	184 160	232 228	280 757	238 730	210 780
Sweden	108 119	144 171	207 395	227 491	189 171	175 269
Netherlands	107 219	129 989	165 158	152 891	127 033	136 458
Canada	85 462	97 621	124 817	115 511	109 703	106 623
Yugoslavia	52 696	49 592	74 651	100 025	94 163	74 225
Chile	93 146	84 248	63 616	71 797	54 403	73 442
Finland	40 333	54 665	82 152	96 632	72 225	69 201
Switzerland	44 630	58 918	74 490	89 992	69 435	67 493
Australia	31 865	45 430	72 820	70 007	62 479	56 520
Austria	26 081	38 909	52 433	59 230	47 217	44 774
Spain	15 565	33 738	49 841	64 741	44 871	41 751
Denmark	11 287	16 821	26 034	22 727	21 671	19 708
Peru	10 162	16 099	26 499	16 288	21 474	18 104
Greece	8 257	7 188	13 496	24 373	24 906	15 644
South Africa	12 031	15 183	15 489	15 876	-	14 645
Singapore	4 380	8 390	13 316	19 106	21 933	13 425
Brazil	2 907	5 806	11 750	10 096	23 922	10 896
Korea, Rep. of	2 182	3 123	3 925	11 692	28 455	9 875
Norway	6 437	6 808	10 433	13 095	9 861	9 327
Ireland	6 359	7 592	10 504	9 264	8 071	8 358
Israel	2 698	3 871	5 140	11 014	8 562	6 257
Mexico	11 379	14 570	2 611	1 005	317	5 976
New Zealand	1 858	3 966	3 860	6 386	7 173	4 649
Zambia	465	12 702	1 369	1 504	562	3 320
Hong Kong	1 166	2 508	2 455	4 698	5 461	3 258
Portugal	1 805	1 106	2 280	3 331	2 841	2 273
India	1 023	1 216	3 996	1 812	1 653	1 940
Zaire	86	80	1 526	2 848	1 074	1 123
Zimbabwe	1 888	130	502	-	-	840
Malaysia	376	162	895	1 307	899	728
Indonesia	-	6	1	1 800	608	604
Saudi Arabia	118	1 655	762	354	66	591
Bahrain	19	1 847	-	10	20	474
Argentina	1 020	329	504	22	136	402
Cuba	-	281	442	-	-	362
United Arab Emirates	-	399	168	357	338	316
Kuwait	-	158	94	17	620	222
Lebanon	104	245	180	173	260	192
Bangladesh	-	1	627	30	32	173
Guatemala	41	25	155	250	-	118
Iran (Islamic Rep. of)	-	-	311	11	8	110
Brunei	10	83	272	46	-	103
US Virgin Islands	3	3	156	230	-	98
Colombia	47	99	222	90	1	92
Total	2 816 309	3 415 297	4 606 128	5 487 891	4 706 127	4 206 350

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Table B.I.3.4.b. Exports of copper and copper alloys, worked, by country, 1977-1981

Percentage of total

Country	1977	1988	1979	1980	1981	5-year average (1977-1981) 2/
Germany, Fed. Rep. of	20.71	22.32	22.84	21.62	22.41	22.06
Belgium/Luxembourg	15.91	14.09	14.06	13.47	10.97	13.47
Japan	12.55	12.01	10.52	11.00	11.83	11.45
France	7.66	7.28	9.05	11.07	11.71	9.70
United Kingdom	10.20	8.74	8.02	8.15	8.52	8.57
United States	4.17	4.71	6.04	7.21	6.94	6.08
Italy	4.19	5.39	5.04	5.12	5.07	5.01
Sweden	3.84	4.22	4.50	4.15	4.02	4.17
Netherlands	3.81	3.81	3.59	2.79	2.70	3.24
Canada	3.03	2.86	2.71	2.10	2.33	2.53
Yugoslavia	1.87	1.45	1.62	1.82	2.00	1.76
Chile	3.31	2.47	1.38	1.31	1.16	1.75
Finland	1.43	1.60	1.78	1.76	1.53	1.65
Switzerland	1.58	1.73	1.62	1.64	1.48	1.60
Australia	1.13	1.33	1.58	1.28	1.33	1.34
Austria	0.93	1.14	1.14	1.08	1.00	1.06
Spain	0.55	0.99	1.08	1.18	0.95	0.99
Denmark	0.40	0.49	0.57	0.41	0.46	0.47
Peru	0.36	0.47	0.58	0.30	0.46	0.43
Greece	0.29	0.21	0.29	0.44	0.53	0.37
South Africa	0.43	0.44	0.34	0.29	0.00	0.35
Singapore	0.16	0.25	0.29	0.35	0.47	0.32
Brazil	0.10	0.17	0.26	0.18	0.51	0.26
Korea, Rep. of	0.08	0.09	0.09	0.21	0.60	0.23
Norway	0.23	0.20	0.23	0.24	0.21	0.22
Ireland	0.23	0.22	0.23	0.17	0.17	0.20
Israel	0.10	0.11	0.11	0.20	0.18	0.15
Mexico	0.40	0.43	0.06	0.02	0.01	0.14
New Zealand	0.07	0.12	0.08	0.12	0.15	0.11
Zambia	0.02	0.37	0.03	0.03	0.01	0.08
Hong Kong	0.04	0.07	0.05	0.09	0.12	0.08
Portugal	0.06	0.03	0.05	0.06	0.06	0.05
India	0.04	0.04	0.09	0.03	0.04	0.05
Zaire	0.00	0.00	0.03	0.05	0.02	0.03
Zimbabwe	0.07	0.00	0.01	0.00	0.00	0.02
Malaysia	0.01	0.00	0.02	0.02	0.02	0.02
Indonesia	0.00	0.00	0.00	0.03	0.01	0.01
Saudi Arabia	0.00	0.05	0.02	0.01	0.00	0.01
Bahrain	0.00	0.05	0.00	0.00	0.00	0.01
Argentina	0.04	0.01	0.01	0.00	0.00	0.01
Cuba	0.00	0.01	0.01	0.00	0.00	0.01
United Arab Emirates	0.00	0.01	0.00	0.01	0.01	0.01
Kuwait	0.00	0.00	0.00	0.00	0.01	0.01
Lebanon	0.00	0.01	0.00	0.00	0.01	0.00
Bangladesh	0.00	0.00	0.01	0.00	0.00	0.00
Guatemala	0.00	0.00	0.00	0.00	0.00	0.00
Iran (Islamic Rep. of)	0.00	0.00	0.01	0.00	0.00	0.00
Brunei	0.00	0.00	0.01	0.00	0.00	0.00
US Virgin Islands	0.00	0.00	0.00	0.00	0.00	0.00
Colombia	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.5.a. Exports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Canada	498 423	241 850	280 265	374 072	436 980	366 318
Cuba	223 482	202 107	212 978	257 215	200 614	219 279
Australia	119 347	106 676	134 823	199 109	299 998	171 991
Indonesia	35 329	35 917	86 692	200 768	150 820	101 905
South Africa	79 043	72 775	94 600	115 294	-	90 428
New Caledonia	79 380	33 383	51 304	99 201	65 129	65 679
Philippines	12 149	11 397	11 756	77 017	26 058	27 675
Guatemala	-	889	23 302	46 032	1 928	18 038
Netherlands	2 696	9 397	17 781	21 660	14 804	13 268
United Kingdom	1 752	1 169	7 182	18 689	24 174	10 593
Finland	-	-	3 413	8 812	11 272	7 832
Brazil	-	-	-	97	11 223	5 660
Madagascar	-	-	5 061	-	-	5 061
Gibraltar	-	-	-	5 942	2 764	4 353
France	749	2 398	10 529	1 428	27	3 026
Germany, Fed. Rep. of	80	32	6 018	1 784	323	1 647
Sweden	1 414	2 869	260	-	-	1 514
Norway	1 371	1 509	1 401	1 729	592	1 320
Yugoslavia	-	0	0	550	3 521	1 018
Zaire	0	1 162	-	-	-	581
Algeria	-	-	652	-	369	511
Israel	4	-	-	587	-	296
Zimbabwe	-	-	-	213	351	282
Peru	-	51	445	-	-	248
Senegal	-	0	-	388	-	194
Spain	105	-	1	354	7	117
Dominican Rep.	-	-	-	97	-	97
Japan	15	-	22	-	222	86
Chile	-	-	123	20	47	63
Italy	28	-	44	27	139	60
Austria	-	10	13	78	79	45
Switzerland	39	64	6	111	4	45
Belgium/Luxembourg	16	19	10	162	15	44
Singapore	1	4	8	137	6	31
Panama	-	-	-	32	6	19
Burundi	-	-	-	6	-	6
Ireland	4	-	-	7	-	6
Colombia	-	-	3	-	-	3
Saudi Arabia	8	-	0	1	0	2
Total	1 055 435	723 678	948 692	1 431 619	1 251 472	1 082 179

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Table B.I.3.5.b. Exports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Canada	47.22	33.42	29.54	26.13	34.92	33.85
Cuba	21.17	27.93	22.45	17.97	16.03	20.26
Australia	11.31	14.74	14.21	13.91	23.97	15.89
Indonesia	3.35	4.96	9.14	14.02	12.05	9.42
South Africa	7.49	10.06	9.97	8.05	0.00	8.36
New Caledonia	7.52	4.61	5.41	6.93	5.20	6.07
Philippines	1.15	1.57	1.24	5.38	2.08	2.56
Guatemala	0.00	0.12	2.46	3.22	0.15	1.67
Netherlands	0.26	1.30	1.87	1.51	1.18	1.23
United Kingdom	0.17	0.16	0.76	1.31	1.93	0.98
Finland	0.00	0.00	0.36	0.62	0.90	0.72
Brazil	0.00	0.00	0.00	0.01	0.90	0.52
Madagascar	0.00	0.00	0.53	0.00	0.00	0.47
Gibraltar	0.00	0.00	0.00	0.42	0.22	0.40
France	0.07	0.33	1.11	0.10	0.00	0.28
Germany, Fed. Rep. of	0.01	0.00	0.63	0.12	0.03	0.15
Sweden	0.13	0.40	0.03	0.00	0.00	0.14
Norway	0.13	0.21	0.15	0.12	0.05	0.12
Yugoslavia	0.00	0.00	0.00	0.04	0.28	0.09
Zaire	0.00	0.16	0.00	0.00	0.00	0.05
Algeria	0.00	0.00	0.07	0.00	0.03	0.05
Israel	0.00	0.00	0.00	0.04	0.00	0.03
Zimbabwe	0.00	0.00	0.00	0.01	0.03	0.03
Peru	0.00	0.01	0.05	0.00	0.00	0.02
Senegal	0.00	0.00	0.00	0.03	0.00	0.02
Spain	0.01	0.00	0.00	0.02	0.00	0.01
Dominican Rep.	0.00	0.00	0.00	0.01	0.00	0.01
Japan	0.00	0.00	0.00	0.00	0.02	0.01
Chile	0.00	0.00	0.01	0.00	0.00	0.01
Italy	0.00	0.00	0.00	0.00	0.01	0.01
Austria	0.00	0.00	0.00	0.01	0.01	0.00
Switzerland	0.00	0.01	0.00	0.01	0.00	0.00
Belgium/Luxembourg	0.00	0.00	0.00	0.01	0.00	0.00
Singapore	0.00	0.00	0.00	0.01	0.00	0.00
Panama	0.00	0.00	0.00	0.00	0.00	0.00
Burundi	0.00	0.00	0.00	0.00	0.00	0.00
Ireland	0.00	0.00	0.00	0.00	0.00	0.00
Colombia	0.00	0.00	0.00	0.00	0.00	0.00
Saudi Arabia	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.6.a. Exports of nickel and nickel alloys, unwrought, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Canada	355 084	413 839	426 465	565 919	487 193	449 700
Norway	103 571	176 642	172 116	225 445	247 910	185 137
United States	68 533	50 020	119 219	123 864	123 390	97 005
United Kingdom	117 204	92 720	88 034	88 596	98 194	96 950
Zimbabwe	49 347	-	-	78 618	149 707	92 557
Philippines	70 721	50 160	79 036	113 419	109 146	84 496
New Caledonia	79 052	57 430	50 895	83 489	88 008	71 775
South Africa	40 743	38 221	76 399	90 819	-	61 546
Australia	34 737	1 449	-	60 312	146 153	60 663
Finland	37 459	25 742	49 266	77 519	72 072	52 412
Germany, Fed. Rep. of	32 799	26 141	64 283	44 232	28 161	39 123
France	24 005	25 120	26 317	45 812	33 431	30 937
Guatemala	-	6 482	18 248	61 206	-	28 645
Cuba	16 546	73 304	10 609	9 209	17 893	25 512
Netherlands	8 791	13 809	20 781	29 168	19 739	18 458
Japan	19 262	14 097	12 463	10 256	9 401	13 096
Hong Kong	1 456	4 850	8 002	15 375	19 755	9 888
Sweden	4 986	2 838	4 065	6 765	4 362	4 603
Belgium/Luxembourg	1 217	1 341	2 192	2 245	740	1 547
Singapore	30	294	817	2 423	2 973	1 307
Italy	1 204	463	1 416	1 195	797	1 015
Switzerland	395	317	2 345	1 169	126	870
Yugoslavia	1	159	767	1 640	1 317	777
Austria	-	17	1 232	606	622	619
Ireland	347	-	-	4	512	288
Spain	25	130	844	102	6	221
Israel	110	70	139	1	341	132
Djibouti	-	-	-	123	-	123
Korea, Rep. of	-	-	213	114	2	110
Rwanda	-	-	100	-	-	100
Mozambique	-	91	-	-	-	91
Malaysia	12	117	99	129	-	89
Dominican Rep.	-	-	-	148	19	84
Angola	13	-	-	122	115	83
Senegal	1	-	162	-	-	82
Brazil	4	64	118	-	98	71
Panama	-	-	-	98	19	59
Syrian Arab Rep.	-	1	107	-	-	54

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Table B.I.3.6.a (continued)

Country	1977	1988	1979	1980	1981	5-year average (1977-1981) 2/
Portugal	-	21	65	-	-	43
India	-	34	4	-	-	19
Cameroon	-	-	-	10	-	10
Thailand	-	-	-	3	-	3
Total	1 067 655	1 075 983	1 236 818	1 740 155	1 662 202	1 356 563

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Table B.I.3.6.b. Exports of nickel and nickel alloys, unwrought, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Canada	33.26	38.46	34.48	32.52	29.31	33.15
Norway	9.70	16.42	13.92	12.96	14.91	13.65
United States	6.42	4.65	9.64	7.12	7.42	7.15
United Kingdom	10.98	8.62	7.12	5.09	5.91	7.15
Zimbabwe	4.62	0.00	0.00	4.52	9.01	6.82
Philippines	6.62	4.66	6.39	6.52	6.57	6.23
New Caledonia	7.40	5.34	4.11	4.80	5.29	5.29
South Africa	3.82	3.55	6.18	5.22	0.00	4.54
Australia	3.25	0.13	0.00	3.47	8.79	4.47
Finland	3.51	2.39	3.98	4.45	4.34	3.86
Germany, Fed. Rep. of	3.07	2.43	5.20	2.54	1.69	2.88
France	2.25	2.33	2.13	2.63	2.01	2.28
Guatemala	0.00	0.60	1.48	3.52	0.00	2.11
Cuba	1.55	6.81	0.86	0.53	1.08	1.88
Netherlands	0.82	1.28	1.68	1.68	1.19	1.36
Japan	1.80	1.31	1.01	0.59	0.57	0.97
Hong Kong	0.14	0.45	0.65	0.88	1.19	0.73
Sweden	0.47	0.26	0.33	0.39	0.26	0.34
Belgium/Luxembourg	0.11	0.12	0.18	0.13	0.04	0.11
Singapore	0.00	0.03	0.07	0.14	0.18	0.10
Italy	0.11	0.04	0.11	0.07	0.05	0.07
Switzerland	0.04	0.03	0.19	0.07	0.01	0.06
Yugoslavia	0.00	0.01	0.06	0.09	0.08	0.06
Austria	0.00	0.00	0.10	0.03	0.04	0.05
Ireland	0.03	0.00	0.00	0.00	0.03	0.02
Spain	0.00	0.01	0.07	0.01	0.00	0.02
Israel	0.01	0.01	0.01	0.00	0.02	0.01
Djibouti	0.00	0.00	0.00	0.01	0.00	0.01
Korea, Rep. of	0.00	0.00	0.02	0.01	0.00	0.01
Rwanda	0.00	0.00	0.01	0.00	0.00	0.01
Mozambique	0.00	0.01	0.00	0.00	0.00	0.01
Malaysia	0.00	0.01	0.01	0.01	0.00	0.01
Dominican Rep.	0.00	0.00	0.00	0.01	0.00	0.01
Angola	0.00	0.00	0.00	0.01	0.01	0.01
Senegal	0.00	0.00	0.01	0.00	0.00	0.01
Brazil	0.00	0.01	0.01	0.00	0.01	0.01
Panama	0.00	0.00	0.00	0.01	0.00	0.00
Syrian Arab Rep.	0.00	0.00	0.01	0.00	0.00	0.00
Portugal	0.00	0.00	0.01	0.00	0.00	0.00
India	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	0.00	0.00	0.00	0.00	0.00	0.00
Thailand	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.7.a. Exports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Canada	434 265	484 633	497 818	703 801	582 473	540 598
United States	161 991	163 871	276 235	328 909	294 866	245 174
United Kingdom	185 094	166 076	199 200	203 427	184 310	187 621
Norway	103 643	176 738	172 344	225 915	248 144	185 357
Germany Fed. Rep. of	146 019	108 613	169 318	183 826	137 030	148 961
Zimbabwe	49 347	-	64 356	144 518	150 196	102 104
Philippines	77 096	55 095	91 660	137 947	136 041	99 568
France	62 477	69 158	76 538	110 249	74 581	78 601
New Caledonia	79 052	57 430	50 895	83 489	88 008	71 775
Australia	66 790	2 046	-	61 314	148 663	69 703
South Africa	44 375	40 334	80 313	96 889	42 029	60 788
Finland	37 626	25 813	49 306	78 926	72 211	52 776
Cuba	-	74 279	-	-	17 893	46 086
Guatemala	-	6 482	18 248	66 881	56 787	37 100
Japan	32 561	28 682	21 358	20 108	18 488	24 239
Netherlands	16 599	17 033	24 858	34 098	27 888	24 095
Sweden	17 525	16 759	23 459	29 579	30 780	23 620
Switzerland	13 551	9 533	13 118	12 589	9 368	11 632
Hong Kong	2 114	5 042	8 482	16 686	21 280	10 721
Belgium/Luxembourg	8 262	8 551	6 571	8 051	3 623	7 012
Italy	6 761	4 494	5 324	5 212	5 771	5 512
Austria	3 895	3 506	4 411	5 506	4 628	4 389
Ireland	2 947	3 024	2 737	4 219	4 122	3 410
Singapore	643	692	1 192	2 826	3 784	1 827
Yugoslavia	6	159	937	2 131	1 373	921
Spain	86	338	1 263	489	228	481
Greece	51	333	687	585	370	405
Malaysia	144	367	199	168	171	210
Israel	110	85	188	50	361	159
Brazil	346	88	149	62	99	149
India	37	422	22	106	96	137
Angola	-	-	-	122	115	119
New Zealand	58	115	315	53	6	109
Korea Rep. of	99	8	221	141	33	100
Rwanda	-	-	100	-	-	100
Denmark	74	91	133	57	139	99
United Arab Emirates	-	-	96	-	-	96
Portugal	12	31	65	85	15	42
Mexico	20	16	-	60	61	39
Argentina	19	-	-	94	3	39
Malta	-	49	50	16	14	32
Zaire	-	-	-	45	18	32
Lebanon	48	-	19	24	17	27
Colombia	-	-	-	30	22	26
Saudi Arabia	13	3	-	42	3	15
Bahrain	-	-	11	-	-	11
Cameroon	-	-	-	10	9	10
Ivory Coast	2	7	6	1	27	9
Kenya	-	-	7	-	-	7
Syrian Arab Republic	2	-	9	-	-	6
Total	1 553 758	1 529 996	1 862 209	2 569 336	2 366 144	1 976 289

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Table B.I.3.7.b. Exports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Canada	27.95	31.68	26.73	27.39	24.62	27.35
United States	10.43	10.71	14.83	12.80	12.46	12.41
United Kingdom	11.91	10.85	10.70	7.92	7.79	9.49
Norway	6.67	11.55	9.25	8.79	10.49	9.38
Germany, Fed. Rep. of	9.40	7.10	9.09	7.15	5.79	7.54
Zimbabwe	3.18	0.00	3.46	5.62	6.35	5.17
Philippines	4.96	3.60	4.92	5.37	5.75	5.04
France	4.02	4.52	4.11	4.29	3.15	3.98
New Caledonia	5.09	3.75	2.73	3.25	3.72	3.63
Australia	4.30	0.13	0.00	2.39	6.28	3.53
South Africa	2.86	2.64	4.31	3.77	1.78	3.08
Finland	2.42	1.69	2.65	3.07	3.05	2.67
Cuba	0.00	4.85	0.00	0.00	0.76	2.33
Guatemala	0.00	0.42	0.98	2.60	2.40	1.88
Japan	2.10	1.87	1.15	0.78	0.78	1.23
Netherlands	1.07	1.11	1.33	1.33	1.18	1.22
Sweden	1.13	1.10	1.26	1.15	1.30	1.20
Switzerland	0.87	0.62	0.70	0.49	0.40	0.59
Hong Kong	0.14	0.33	0.46	0.65	0.90	0.54
Belgium/Luxembourg	0.53	0.56	0.35	0.31	0.15	0.35
Italy	0.44	0.29	0.29	0.20	0.24	0.28
Austria	0.25	0.23	0.24	0.21	0.20	0.22
Ireland	0.19	0.20	0.15	0.16	0.17	0.17
Singapore	0.04	0.05	0.06	0.11	0.16	0.09
Yugoslavia	0.00	0.01	0.05	0.08	0.06	0.05
Spain	0.01	0.02	0.07	0.02	0.01	0.02
Greece	0.00	0.02	0.04	0.02	0.02	0.02
Malaysia	0.01	0.02	0.01	0.01	0.01	0.01
Israel	0.01	0.01	0.01	0.00	0.02	0.01
Brazil	0.02	0.01	0.01	0.00	0.00	0.01
India	0.00	0.03	0.00	0.00	0.00	0.01
Angola	0.00	0.00	0.00	0.00	0.00	0.01
New Zealand	0.00	0.01	0.02	0.00	0.00	0.01
Korea, Rep. of	0.01	0.00	0.01	0.01	0.00	0.01
Rwanda	0.00	0.00	0.01	0.00	0.00	0.01
Denmark	0.00	0.01	0.01	0.00	0.01	0.00
United Arab Emirates	0.00	0.00	0.01	0.00	0.00	0.00
Portugal	0.00	0.00	0.00	0.00	0.00	0.00
Mexico	0.00	0.00	0.00	0.00	0.00	0.00
Argentina	0.00	0.00	0.00	0.00	0.00	0.00
Malta	0.00	0.00	0.00	0.00	0.00	0.00
Zaire	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon	0.00	0.00	0.00	0.00	0.00	0.00
Colombia	0.00	0.00	0.00	0.00	0.00	0.00
Saudi Arabia	0.00	0.00	0.00	0.00	0.00	0.00
Bahrain	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	0.00	0.00	0.00	0.00	0.00	0.00
Ivory Coast	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	0.00	0.00	0.00	0.00	0.00	0.00
Syrian Arab Republic	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.8. Exports of cobalt, by country, 1977-1981
F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Zaire	108 500	216 100	617 100	343 800	104 000	277 900
Zambia	19 400	37 700	164 100	88 100	n.a.	77 325
Philippines	8 300	19 700	51 900	51 400	37 600	33 780
Other countries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
World	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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Table B.I.3.9.a. Exports of manganese ore and concentrates, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
South Africa	97 686	97 168	144 182	138 739		119 444
Gabon	108 618	108 497	97 086	126 120	101 582	108 381
Brazil	8 165	17 897	58 882	59 138	58 292	40 475
Australia	43 528	-	55 637	106	178	24 862
India	15 140	18 333	17 069	28 819	26 088	21 090
Ghana	16 391	16 253	26 632	20 103	17 962	19 468
Morocco	11 790	14 478	15 852	14 686	12 333	13 828
Mexico	13 467	14 683	8 171	10 182	13 990	12 099
United States	11 277	17 586	6 609	8 080	8 128	10 336
Congo	9 000	11 110	13 367	7 149	10 266	10 178
Netherlands	6 216	9 123	9 251	9 837	9 954	8 876
Thailand	1 635	1 472	14 730	1 377	19 154	7 674
Singapore	2 795	4 140	5 286	9 054	9 064	6 068
Indonesia	2 519	944	136	92	9 373	2 613
Comoros	1 575	-	2 537	2 079	-	2 064
United Kingdom	1 662	2 091	1 305	2 813	1 089	1 792
Zaire	-	1 939	1 997	2 078	390	1 601
France	1 822	1 397	1 658	1 482	1 646	1 601
Cook Islands	-	-	-	1 336	-	1 336
Belgium/Luxembourg	1 106	1 127	811	1 619	1 136	1 160
Japan	1 229	1 364	1 660	535	299	1 017
Portugal	1 730	619	533	206	1 048	827
Vanuatu	682	746	604	258	274	513
Germany, Fed. Rep. of	840	401	357	351	560	502
Norway	215	-	290	506	517	382
Philippines	684	478	411	32	185	358
Turkey	386	-	368	312	-	355
Malaysia	463	122	281	-	-	289
Greece	406	0	25	123	261	163
Mali	-	-	-	151	119	135
Bolivia	213	72	2	45	53	77
Colombia	106	81	37	-	-	75
Yugoslavia	135	-	30	-	54	73
Hong Kong	-	-	-	68	-	68
Pakistan	-	-	-	62	-	62
Sweden	88	73	74	5	55	59
Panama	-	-	-	99	19	59
Spain	35	19	30	18	171	55
Angola	-	-	-	51	48	50
Austria	-	-	35	63	-	49
Argentina	9	10	167	5	-	48
Neth. Antilles	-	44	-	-	-	44
Italy	18	15	4	47	95	36
Denmark	19	32	-	-	-	26
Chile	13	17	39	-	-	23
Ireland	-	22	7	-	-	15
Mozambique	-	-	-	5	-	5
Peru	-	-	1	2	-	2
Total	361 663	342 353	486 153	447 833	304 383	388 477

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Table B.I.3.9.b. Exports of manganese ore and concentrates, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
South Africa	27.01	28.38	29.66	30.98	0.00	30.75
Gabon	30.03	31.69	19.97	28.16	33.37	27.90
Brazil	2.26	5.23	12.11	13.21	19.15	10.42
Australia	12.04	0.00	11.44	0.02	0.06	6.40
India	4.19	5.35	3.51	6.44	8.57	5.43
Ghana	4.53	4.75	5.48	4.49	5.90	5.01
Morocco	3.26	4.23	3.26	3.28	4.05	3.56
Mexico	3.72	4.29	1.68	2.27	4.60	3.11
United States	3.12	5.14	1.36	1.80	2.67	2.66
Congo	2.49	3.25	2.75	1.60	3.37	2.62
Netherlands	1.72	2.66	1.90	2.20	3.27	2.28
Thailand	0.45	0.43	3.03	0.31	6.29	1.98
Singapore	0.77	1.21	1.09	2.02	2.98	1.56
Indonesia	0.70	0.28	0.03	0.02	3.08	0.67
Comoros	0.44	0.00	0.52	0.46	0.00	0.53
United Kingdom	0.46	0.61	0.27	0.63	0.36	0.46
Zaire	0.00	0.57	0.41	0.46	0.13	0.41
France	0.50	0.41	0.34	0.33	0.54	0.41
Cook Islands	0.00	0.00	0.00	0.30	0.00	0.34
Belgium/Luxembourg	0.31	0.33	0.17	0.36	0.37	0.30
Japan	0.34	0.40	0.34	0.12	0.10	0.26
Portugal	0.48	0.18	0.11	0.05	0.34	0.21
Vanuatu	0.19	0.22	0.12	0.06	0.09	0.13
Germany, Fed. Rep. of	0.23	0.12	0.07	0.08	0.18	0.13
Norway	0.06	0.00	0.06	0.11	0.17	0.10
Philippines	0.19	0.14	0.08	0.01	0.06	0.09
Turkey	0.11	0.00	0.08	0.07	0.00	0.09
Malaysia	0.13	0.04	0.06	0.00	0.00	0.07
Greece	0.11	0.00	0.01	0.03	0.09	0.04
Mali	0.00	0.00	0.00	0.03	0.04	0.03
Bolivia	0.06	0.02	0.00	0.01	0.02	0.02
Colombia	0.03	0.02	0.01	0.00	0.00	0.02
Yugoslavia	0.04	0.00	0.01	0.00	0.02	0.02
Hong Kong	0.00	0.00	0.00	0.02	0.00	0.02
Pakistan	0.00	0.00	0.00	0.01	0.00	0.02
Sweden	0.02	0.02	0.02	0.00	0.02	0.02
Panama	0.00	0.00	0.00	0.02	0.01	0.02
Spain	0.01	0.01	0.01	0.00	0.06	0.01
Angola	0.00	0.00	0.00	0.01	0.02	0.01
Austria	0.00	0.00	0.01	0.01	0.00	0.01
Argentina	0.00	0.00	0.03	0.00	0.00	0.01
Neth. Antilles	0.00	0.01	0.00	0.00	0.00	0.01
Italy	0.00	0.00	0.00	0.01	0.03	0.01
Denmark	0.01	0.01	0.00	0.00	0.00	0.01
Chile	0.00	0.00	0.01	0.00	0.00	0.01
Ireland	0.00	0.01	0.00	0.00	0.00	0.00
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00
Peru	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.3.10.a. Exports of ferro-manganese, by country, 1977-1981

F.O.B. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
France	95 167	113 528	139 979	140 625	152 175	128 295
South Africa	49 348	97 962	162 214	113 518	-	105 761
Norway	82 815	93 360	122 207	113 035	83 876	99 059
Japan	21 520	19 705	49 763	23 731	19 483	26 840
Germany, Fed. Rep. of	26 523	18 625	40 955	19 111	21 710	25 385
Spain	10 864	18 555	31 419	19 579	19 613	20 006
Portugal	12 139	16 382	23 248	20 730	9 246	16 349
Belgium/Luxembourg	17 809	11 310	19 176	16 803	4 511	13 922
Brazil	9 671	11 118	14 742	14 198	12 223	12 390
United States	3 588	4 935	19 426	8 195	12 879	9 805
Canada	7 557	5 143	2 416	3 263	21 208	7 917
Yugoslavia	5 786	8 537	7 993	3 420	8 214	6 790
India	541	13 392	15 224	1 333	2 301	6 558
Australia	3 415	4 354	8 684	7 182	5 348	5 797
Mexico	1 702	8 868	5 809	3 685	4 436	4 900
Italy	1 105	5 848	5 125	1 302	504	2 777
United Kingdom	188	526	2 741	468	9 293	2 643
Korea, Rep. of	5 716	32	-	21	64	1 458
Sweden	149	291	877	958	570	569
Netherlands	712	443	294	227	786	492
Gibraltar	-	-	89	-	-	89
Switzerland	-	62	191	12	-	88
Chile	139	63	72	-	23	74
Algeria	-	-	-	70	58	64
Ireland	-	12	-	92	28	44
Venezuela	41	-	21	-	-	31
Singapore	17	12	42	27	18	23
Finland	-	-	17	-	-	17
Austria	19	35	7	3	3	13
Turkey	-	-	-	12	-	12
Niger	-	-	7	-	-	7
Denmark	-	-	9	-	0	5
Malaysia	-	7	-	1	-	4
Jordan	-	-	2	-	-	2
Total	356 531	453 105	672 749	511 601	388 570	476 511

Table B.I.3.10.b. Exports of ferro-manganese, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
France	26.69	25.06	20.81	27.49	39.16	26.92
South Africa	13.84	21.62	24.11	22.19	0.00	22.19
Norway	23.23	20.60	18.17	22.09	21.59	20.79
Japan	6.04	4.35	7.40	4.64	5.01	5.63
Germany, Fed. Rep. of	7.44	4.11	6.09	3.74	5.59	5.33
Spain	3.05	4.10	4.67	3.83	5.05	4.20
Portugal	3.40	3.62	3.46	4.05	2.38	3.43
Belgium/Luxembourg	5.00	2.50	2.85	3.28	1.16	2.92
Brazil	2.71	2.45	2.19	2.78	3.15	2.60
United States	1.01	1.09	2.89	1.60	3.31	2.06
Canada	2.12	1.14	0.36	0.64	5.46	1.66
Yugoslavia	1.62	1.88	1.19	0.67	2.11	1.42
India	0.15	2.96	2.26	0.26	0.59	1.38
Australia	0.96	0.96	1.29	1.40	1.38	1.22
Mexico	0.48	1.96	0.86	0.72	1.14	1.03
Italy	0.31	1.29	0.76	0.25	0.13	0.58
United Kingdom	0.05	0.12	0.41	0.09	2.39	0.55
Korea, Rep. of	1.60	0.01	0.00	0.00	0.02	0.31
Sweden	0.04	0.06	0.13	0.19	0.15	0.12
Netherlands	0.20	0.10	0.04	0.04	0.20	0.10
Gibraltar	0.00	0.00	0.01	0.00	0.00	0.02
Switzerland	0.00	0.01	0.03	0.00	0.00	0.02
Chile	0.04	0.01	0.01	0.00	0.01	0.02
Algeria	0.00	0.00	0.00	0.01	0.01	0.01
Ireland	0.00	0.00	0.00	0.02	0.01	0.01
Venezuela	0.01	0.00	0.00	0.00	0.00	0.01
Singapore	0.00	0.00	0.01	0.01	0.00	0.00
Finland	0.00	0.00	0.00	0.00	0.00	0.00
Austria	0.01	0.01	0.00	0.00	0.00	0.00
Turkey	0.00	0.00	0.00	0.00	0.00	0.00
Niger	0.00	0.00	0.00	0.00	0.00	0.00
Denmark	0.00	0.00	0.00	0.00	0.00	0.00
Malaysia	0.00	0.00	0.00	0.00	0.00	0.00
Jordan	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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B.I.4. IMPORTS*

Table B.I.4.1.a. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Japan	883 706	939 404	1 514 038	2 043 390	1 676 341	1 411 376
Germany, Fed. Rep. of	-	189 031	275 674	430 964	283 114	294 696
Spain	-	80 527	104 673	145 720	105 606	109 132
Korea, Rep. of	36 448	24 478	60 334	158 890	207 635	97 557
USA + Puerto Rico	-	51 641	68 792	78 953	111 457	77 711
Sweden	13 202	18 295	23 524	43 620	51 560	30 040
Yugoslavia	-	44 228	-	16 790	4 569	21 862
Canada	-	14 694	2 660	12 829	17 004	11 797
Belgium/Luxembourg	-	2 718	3 303	3 606	29 683	9 828
Finland	572	1 235	12 048	8 276	21 544	8 735
Turkey	-	-	30	-	15 611	7 821
South Africa	-	5	9 942	-	-	4 974
Mexico	-	5 086	1 477	-	6 377	4 313
Portugal	-	-	1 014	3 351	3 633	2 666
Australia	-	-	58	122	7 379	2 520
United Kingdom	-	2 298	815	1 200	753	1 267
Kuwait	-	-	2 227	81	81	796
France	-	700	92	2 200	27	755
Thailand	311	684	1 623	5	307	586
United Arab Emirates	-	-	475	-	-	475
Italy	1 005	145	19	472	334	395
Netherlands	-	148	192	164	53	139
Argentina	-	-	-	9	256	133
Tunisia	-	-	-	112	109	111
Indonesia	-	-	68	-	110	89
Syrian Arab Republic	-	-	147	26	-	87
Saudi Arabia	147	50	83	44	1	65
Switzerland	139	43	39	46	22	58
Papua New Guinea	-	55	-	-	-	55
Lebanon	-	-	-	53	-	53
Norway	35	55	131	6	12	48
Jordan	-	-	-	35	-	35
Austria	-	14	73	0	24	28
Costa Rica	-	27	-	-	-	27
Israel	-	3	11	-	65	26
Venezuela	-	24	-	-	-	24
Sri Lanka	-	-	26	-	11	19
Ethiopia	-	-	0	36	-	18
Ivory Coast	-	-	10	4	32	15
Ireland	-	2	35	15	2	14
Andorra	-	-	-	13	-	13
Yemen	-	-	12	-	-	12
Malaysia	-	20	5	17	2	11
Colombia	-	-	11	-	-	11
Ecuador	-	-	-	11	-	11
Denmark	5	-	-	20	6	10
Morocco	1	-	0	23	-	8
Guatemala	-	13	2	2	-	6
Philippines	2	1	-	8	-	4
Fr. Polynesia	-	0	7	2	0	2
Total	935 573	1 375 624	2 083 663	2 951 113	2 543 720	1 977 939

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* For sources and notes, please refer to the end of section B.I.4. Import data are for market economy countries only.

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Table B.I.4.1.b. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Japan	94.46	68.29	72.66	69.24	65.90	71.36
Germany, Fed. Rep. of	0.00	13.74	13.23	14.60	11.13	14.90
Spain	0.00	5.85	5.02	4.94	4.15	5.52
Korea, Rep. of	3.90	1.78	2.90	5.38	8.16	4.93
USA + Puerto Rico	0.00	3.75	3.30	2.68	4.38	3.93
Sweden	1.41	1.33	1.13	1.48	2.03	1.52
Yugoslavia	0.00	3.22	0.00	0.57	0.18	1.11
Canada	0.00	1.07	0.13	0.43	0.67	0.60
Belgium/Luxembourg	0.00	0.20	0.16	0.12	1.17	0.50
Finland	0.06	0.09	0.58	0.28	0.85	0.44
Turkey	0.00	0.00	0.00	0.00	0.61	0.40
South Africa	0.00	0.00	0.48	0.00	0.00	0.25
Mexico	0.00	0.37	0.07	0.00	0.25	0.22
Portugal	0.00	0.00	0.05	0.11	0.14	0.13
Australia	0.00	0.00	0.00	0.00	0.29	0.13
United Kingdom	0.00	0.17	0.04	0.04	0.03	0.06
Kuwait	0.00	0.00	0.11	0.00	0.00	0.04
France	0.00	0.05	0.00	0.07	0.00	0.04
Thailand	0.03	0.05	0.08	0.00	0.01	0.03
United Arab Emirates	0.00	0.00	0.02	0.00	0.00	0.02
Italy	0.11	0.01	0.00	0.02	0.01	0.02
Netherlands	0.00	0.01	0.01	0.01	0.00	0.01
Argentina	0.00	0.00	0.00	0.00	0.01	0.01
Tunisia	0.00	0.00	0.00	0.00	0.00	0.01
Indonesia	0.00	0.00	0.00	0.00	0.00	0.00
Syrian Arab Republic	0.00	0.00	0.01	0.00	0.00	0.00
Saudi Arabia	0.02	0.00	0.00	0.00	0.00	0.00
Switzerland	0.01	0.00	0.00	0.00	0.00	0.00
Papua New Guinea	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon	0.00	0.00	0.00	0.00	0.00	0.00
Norway	0.00	0.00	0.01	0.00	0.00	0.00
Jordan	0.00	0.00	0.00	0.00	0.00	0.00
Austria	0.00	0.00	0.00	0.00	0.00	0.00
Costa Rica	0.00	0.00	0.00	0.00	0.00	0.00
Israel	0.00	0.00	0.00	0.00	0.00	0.00
Venezuela	0.00	0.00	0.00	0.00	0.00	0.00
Sri Lanka	0.00	0.00	0.00	0.00	0.00	0.00
Ethiopia	0.00	0.00	0.00	0.00	0.00	0.00
Ivory Coast	0.00	0.00	0.00	0.00	0.00	0.00
Ireland	0.00	0.00	0.00	0.00	0.00	0.00
Andorra	0.00	0.00	0.00	0.00	0.00	0.00
Yemen	0.00	0.00	0.00	0.00	0.00	0.00
Malaysia	0.00	0.00	0.00	0.00	0.00	0.00
Colombia	0.00	0.00	0.00	0.00	0.00	0.00
Ecuador	0.00	0.00	0.00	0.00	0.00	0.00
Denmark	0.00	0.00	0.00	0.00	0.00	0.00
Morocco	0.00	0.00	0.00	0.00	0.00	0.00
Guatemala	0.00	0.00	0.00	0.00	0.00	0.00
Philippines	0.00	0.00	0.00	0.00	0.00	0.00
Fr. Polynesia	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.2.a. Imports of copper waste and scrap, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Germany, Fed. Rep. of	117 273	149 035	260 719	310 537	208 811	209 275
Belgium/Luxembourg	80 772	88 435	152 352	216 329	148 361	137 250
Italy	67 891	64 924	85 855	132 735	60 895	82 460
Japan	42 029	62 094	67 089	80 592	78 050	65 971
Korea, Rep. of	37 518	62 102	77 031	30 957	40 586	49 639
United States	32 480	36 025	48 683	56 687	57 050	46 185
India	16 552	18 498	42 502	58 039	52 246	37 567
France	16 583	19 181	32 554	58 399	36 919	32 727
Canada	14 726	23 237	37 327	42 256	36 840	30 877
Netherlands	13 059	16 336	24 988	36 721	35 436	25 308
Spain	5 534	5 711	20 383	50 707	41 869	24 841
United Kingdom	20 797	15 672	19 388	15 894	12 914	16 933
Austria	8 985	9 663	21 762	27 174	13 449	16 207
Mexico	1	347	7 316	19 416	11 864	7 789
Sweden	4 696	4 642	5 926	10 634	8 457	6 871
Finland	862	694	4 111	13 512	9 646	5 765
Switzerland	4 296	5 379	4 408	6 802	4 270	5 031
Singapore	1 182	1 871	3 797	6 616	6 627	4 019
Denmark	767	1 306	3 710	3 686	5 895	3 073
Brazil	974	1 441	3 484	6 242	2 464	2 921
Pakistan	5 873	4 158	1 425	9	-	2 866
Nigeria	4 150	-	1 247	-	-	2 699
Iran	1 706	496	449	4 830	4 516	2 399
Hong Kong	3 562	1 746	1 997	2 879	1 459	2 329
Kuwait	180	1 998	4 344	2 216	2 225	2 193
Turkey	2 588	364	1 102	2 014	3 661	1 946
Egypt	1 130	909	255	2 951	-	1 311
Australia	613	626	1 095	2 209	1 444	1 197
Thailand	1 962	831	699	577	754	965
Greece	211	83	320	655	3 241	902
Saudi Arabia	2 053	594	967	65	646	865
Norway	429	404	307	661	402	441
Portugal	664	728	199	218	117	385
United Arab Emirates	-	-	826	171	6	334
Ireland	78	137	116	342	664	267
Argentina	0	0	899	214	108	244
South Africa	109	112	51	417	-	172
Syrian Arab Republic	2	151	196	220	86	131
Angola	34	381	54	78	98	129
Lebanon	92	-	-	199	75	122
Ghana	-	19	239	54	46	90
Chile	-	0	-	213	38	84
Yugoslavia	12	0	1	222	143	76
Malta	134	68	53	1	-	64
Malaysia	42	29	77	92	50	58
Philippines	25	4	-	125	55	52
Algeria	0	28	45	0	167	48
Venezuela	0	8	69	2	32	22
Colombia	12	29	2	39	21	21
Tunisia	-	0	0	70	0	18
Total	512 638	600 496	940 419	1 205 608	892 703	830 373

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Table B.I.4.2.b. Imports of copper waste and scrap, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Germany, Fed. Rep. of	22.88	24.82	27.72	25.76	23.39	25.20
Belgium/Luxembourg	15.76	14.73	16.20	17.94	16.62	16.53
Italy	13.24	10.81	9.13	11.01	6.82	9.93
Japan	8.20	10.34	7.13	6.68	8.74	7.94
Korea, Rep. of	7.32	10.34	8.19	2.57	4.55	5.98
United States	6.34	6.00	5.18	4.70	6.39	5.56
India	3.23	3.08	4.52	4.81	5.85	4.52
France	3.23	3.19	3.46	4.84	4.14	3.94
Canada	2.87	3.87	3.97	3.50	4.13	3.72
Netherlands	2.55	2.72	2.66	3.05	3.97	3.05
Spain	1.08	0.95	2.17	4.21	4.69	2.99
United Kingdom	4.06	2.61	2.06	1.32	1.45	2.04
Austria	1.75	1.61	2.31	2.25	1.51	1.95
Mexico	0.00	0.06	0.78	1.61	1.33	0.94
Sweden	0.92	0.77	0.63	0.88	0.95	0.83
Finland	0.17	0.12	0.44	1.12	1.08	0.69
Switzerland	0.84	0.90	0.47	0.56	0.48	0.61
Singapore	0.23	0.31	0.40	0.55	0.74	0.48
Denmark	0.15	0.22	0.39	0.31	0.66	0.37
Brazil	0.19	0.24	0.37	0.52	0.28	0.35
Pakistan	1.15	0.69	0.15	0.00	0.00	0.35
Nigeria	0.81	0.00	0.13	0.00	0.00	0.32
Iran (Islamic Rep. of)	0.33	0.08	0.05	0.40	0.51	0.29
Hong Kong	0.69	0.29	0.21	0.24	0.16	0.28
Kuwait	0.04	0.33	0.46	0.18	0.25	0.26
Turkey	0.50	0.06	0.12	0.17	0.41	0.23
Egypt	0.22	0.15	0.03	0.24	0.00	0.16
Australia	0.12	0.10	0.12	0.18	0.16	0.14
Thailand	0.38	0.14	0.07	0.05	0.08	0.12
Greece	0.04	0.01	0.03	0.05	0.36	0.11
Saudi Arabia	0.40	0.10	0.10	0.01	0.07	0.10
Norway	0.08	0.07	0.03	0.05	0.05	0.05
Portugal	0.13	0.12	0.02	0.02	0.01	0.05
United Arab Emirates	0.00	0.00	0.09	0.01	0.00	0.04
Ireland	0.02	0.02	0.01	0.03	0.07	0.03
Argentina	0.00	0.00	0.10	0.02	0.01	0.03
South Africa	0.02	0.02	0.01	0.03	0.00	0.02
Syrian Arab Republic	0.00	0.03	0.02	0.02	0.01	0.02
Angola	0.01	0.06	0.01	0.01	0.01	0.02
Lebanon	0.02	0.00	0.00	0.02	0.01	0.01
Ghana	0.00	0.00	0.03	0.00	0.01	0.01
Chile	0.00	0.00	0.00	0.02	0.00	0.01
Yugoslavia	0.00	0.00	0.00	0.02	0.02	0.01
Malta	0.03	0.01	0.01	0.00	0.00	0.01
Malaysia	0.01	0.00	0.01	0.01	0.01	0.01
Philippines	0.00	0.00	0.00	0.01	0.01	0.01
Algeria	0.00	0.00	0.00	0.00	0.02	0.01
Venezuela	0.00	0.00	0.01	0.00	0.00	0.00
Colombia	0.00	0.00	0.00	0.00	0.00	0.00
Tunisia	0.00	0.00	0.00	0.01	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.3.a. Imports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Germany, Fed. Rep. of	789 876	778 323	1 061 758	1 208 345	856 538	938 968
Belgium/Luxembourg	746 466	727 586	998 580	1 273 007	917 255	932 579
United States	535 652	651 239	568 273	1 161 196	809 770	745 226
France	458 408	423 097	737 377	960 546	722 548	660 395
United Kingdom	591 212	545 594	735 577	807 350	510 795	638 106
Italy	427 931	500 296	695 234	857 561	576 486	611 502
Japan	371 290	447 182	721 767	667 289	622 184	565 942
Brazil	260 032	213 858	367 206	486 477	295 866	324 688
Sweden	69 681	102 099	145 942	174 128	119 503	122 271
Spain	67 854	49 599	93 727	108 184	84 441	80 761
India	40 616	86 188	85 390	95 767	80 306	77 653
Yugoslavia	32 297	47 381	68 820	113 251	126 152	77 580
Argentina	51 096	44 779	95 002	91 671	53 078	67 125
Netherlands	71 275	38 553	58 374	48 152	46 821	52 635
Canada	27 967	33 376	63 198	26 834	47 154	39 706
Greece	30 742	29 908	45 062	52 965	35 367	38 809
Korea, Rep. of	15 450	20 526	50 975	33 178	45 147	33 055
Finland	14 398	20 822	23 968	57 434	37 154	30 755
Austria	28 693	28 506	25 542	37 804	24 555	29 020
Switzerland	37 778	33 194	24 361	24 770	21 213	28 263
Portugal	27 869	23 927	23 481	28 169	22 188	25 127
Indonesia	450	413	10 088	30 613	29 237	14 160
Venezuela	11 173	10 603	10 911	9 821	7 826	10 067
Thailand	8 999	6 885	10 911	10 287	11 125	9 641
Mexico	96	102	16 144	18 472	12 302	9 423
Philippines	9 654	9 906	11 030	12 105	766	8 692
Turkey	5 819	1 258	4 287	15 842	16 170	8 675
Denmark	10 568	8 721	8 525	8 798	4 034	8 129
Algeria	8 940	6 401	3 880	13 765	1 720	6 941
South Africa	3 451	1 207	3 599	17 746	-	6 501
Colombia	3 090	4 799	7 174	6 706	2 754	4 905
New Zealand	2 063	3 813	5 362	6 277	5 251	4 553
Norway	2 690	4 181	5 230	5 218	4 175	4 299
Egypt	126	4 572	34	1 764	5 049	2 309
Australia	970	175	664	632	7 181	1 924
Iran (Islamic Rep. of)	1 790	480	2 139	939	4 055	1 881
Libyan Arab Jamahiriya	1 815	2 663	219	1 306	8	1 202
Chile	1	1	330	3 212	2 110	1 131
Pakistan	678	1 811	1 356	984	307	1 027
Hong Kong	320	221	455	416	2 376	758
Singapore	518	439	683	1 391	647	736
Nigeria	88	272	897	150	1 966	675
Israel	328	1 172	840	296	676	662
Cuba	94	278	-	1 006	1 150	632
Bolivia	18	68	831	1 361	808	617
Syrian Arab Republic	1 369	595	459	66	120	522
Morocco	190	288	453	578	1 094	521
Burma	20	182	119	1 619	150	418
Ireland	528	236	285	445	389	377
Uruguay	144	124	339	546	382	307
Total	4 772 429	4 917 775	6 796 519	8 485 893	6 177 967	6 230 117

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Table B.I.4.3.b. Imports of copper and copper alloys, refined or not, unwrought, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Germany, Fed. Rep. of	16.55	15.83	15.62	14.24	13.86	15.07
Belgium/Luxembourg	15.64	14.80	14.69	15.00	14.85	14.97
United States	11.22	13.24	8.36	13.68	13.11	11.96
France	9.61	8.60	10.85	11.32	11.70	10.60
United Kingdom	12.39	11.09	10.82	9.51	8.27	10.24
Italy	8.97	10.17	10.23	10.11	9.33	9.82
Japan	7.78	9.09	10.62	7.86	10.07	9.08
Brazil	5.45	4.35	5.40	5.73	4.79	5.21
Sweden	1.46	2.08	2.15	2.05	1.93	1.96
Spain	1.42	1.01	1.38	1.27	1.37	1.30
India	0.85	1.75	1.26	1.13	1.30	1.25
Yugoslavia	0.68	0.96	1.01	1.33	2.04	1.25
Argentina	1.07	0.91	1.40	1.08	0.86	1.08
Netherlands	1.49	0.78	0.86	0.57	0.76	0.84
Canada	0.59	0.68	0.93	0.32	0.76	0.64
Greece	0.64	0.61	0.66	0.62	0.57	0.62
Korea, Rep. of	0.32	0.42	0.75	0.39	0.73	0.53
Finland	0.30	0.42	0.35	0.68	0.60	0.49
Austria	0.60	0.58	0.38	0.45	0.40	0.47
Switzerland	0.79	0.67	0.36	0.29	0.34	0.45
Portugal	0.58	0.49	0.35	0.33	0.36	0.40
Indonesia	0.01	0.01	0.15	0.36	0.47	0.23
Venezuela	0.23	0.22	0.16	0.12	0.13	0.16
Thailand	0.19	0.14	0.16	0.12	0.18	0.15
Mexico	0.00	0.00	0.24	0.22	0.20	0.15
Philippines	0.20	0.20	0.16	0.14	0.01	0.14
Turkey	0.12	0.03	0.06	0.19	0.26	0.14
Denmark	0.22	0.18	0.13	0.10	0.07	0.13
Algeria	0.19	0.13	0.06	0.16	0.03	0.11
South Africa	0.07	0.02	0.05	0.21	0.00	0.10
Colombia	0.06	0.10	0.11	0.08	0.04	0.08
New Zealand	0.04	0.08	0.08	0.07	0.08	0.07
Norway	0.06	0.09	0.08	0.06	0.07	0.07
Egypt	0.00	0.09	0.00	0.02	0.08	0.04
Australia	0.02	0.00	0.01	0.01	0.12	0.03
Iran (Islamic Rep. of)	0.04	0.01	0.03	0.01	0.07	0.03
Libyan Arab Jamahiriya	0.04	0.05	0.00	0.02	0.00	0.02
Chile	0.00	0.00	0.00	0.04	0.03	0.02
Pakistan	0.01	0.04	0.02	0.01	0.00	0.02
Hong Kong	0.01	0.00	0.01	0.00	0.04	0.01
Singapore	0.01	0.01	0.01	0.02	0.01	0.01
Nigeria	0.00	0.01	0.01	0.00	0.03	0.01
Israel	0.01	0.02	0.01	0.00	0.01	0.01
Cuba	0.00	0.01	0.00	0.01	0.02	0.01
Bolivia	0.00	0.00	0.01	0.02	0.01	0.01
Syrian Arab Republic	0.03	0.01	0.01	0.00	0.00	0.01
Morocco	0.00	0.01	0.01	0.01	0.02	0.01
Burma	0.00	0.00	0.00	0.02	0.00	0.01
Ireland	0.01	0.00	0.00	0.01	0.01	0.01
Uruguay	0.00	0.00	0.00	0.01	0.01	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.4.a. Imports of copper and copper alloys, worked, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
France	369 265	403 562	528 442	609 760	402 905	462 787
Germany, Fed. Rep. of	310 582	341 317	510 264	666 671	455 534	456 874
United States	303 869	420 588	470 398	373 671	542 804	422 266
Italy	135 106	171 570	305 113	447 820	264 231	264 768
United Kingdom	103 255	168 428	334 829	304 991	259 646	234 230
Netherlands	178 030	196 974	274 191	314 043	194 023	231 452
Switzerland	107 747	138 346	207 332	270 966	195 878	184 054
Austria	66 107	84 078	132 353	175 055	141 052	119 729
Belgium/Luxembourg	82 281	108 265	135 128	147 823	103 368	115 373
Sweden	75 904	87 349	117 718	137 015	99 562	103 510
Iran (Islamic Rep. of)	93 816	97 172	49 093	105 220	96 213	88 303
Spain	55 303	49 276	86 281	108 257	116 291	83 082
Denmark	60 123	64 418	105 303	107 766	69 574	81 437
Canada	58 862	56 963	75 283	85 348	108 398	76 971
Hong Kong	50 514	54 673	78 725	104 891	87 312	75 223
Norway	54 590	54 893	75 556	91 651	77 076	70 753
Singapore	32 117	36 235	56 791	85 371	78 499	57 803
Korea, Rep. of	24 457	37 727	59 937	53 256	56 490	46 373
Venezuela	37 939	42 130	49 682	46 023	47 693	44 693
Algeria	24 692	32 221	40 284	54 711	66 105	43 603
Malaysia	17 482	20 782	35 719	63 649	77 108	42 948
Israel	30 748	38 902	47 107	46 445	48 322	42 305
Ireland	26 419	30 416	44 452	55 481	43 955	40 145
Saudi Arabia	14 805	22 296	35 086	55 527	49 621	35 467
Finland	19 542	20 843	33 068	55 243	44 349	34 609
India	11 577	22 450	21 348	50 419	56 623	32 483
Portugal	20 051	21 492	30 289	46 361	41 786	31 996
Indonesia	24 938	31 144	34 395	24 835	27 966	28 656
Thailand	18 769	22 771	33 513	35 580	31 481	28 423
New Zealand	19 441	24 106	27 966	31 387	29 904	26 561
Mexico	3 694	4 669	27 792	55 160	37 797	25 822
Cuba	4 449	19 336	35 394	31 789	36 347	25 463
Nigeria	12 307	18 821	17 838	37 413	33 993	24 074
Colombia	10 626	17 740	18 686	30 840	39 127	23 404
Australia	13 174	15 472	19 984	22 953	29 384	20 193
United Arab Emirates	6 956	26 734	7 794	27 997	28 928	19 682
Morocco	13 591	14 372	17 260	22 673	22 453	18 070
Syrian Arab Republic	20 758	9 750	12 655	20 562	25 120	17 769
Yugoslavia	13 290	17 377	19 247	12 740	23 312	17 193
Iraq	6 049	14 116	9 186	18 488	26 150	14 798
Philippines	8 787	10 328	12 943	14 646	24 858	14 312
Japan	8 480	8 553	19 013	16 784	16 921	13 950
Brazil	10 424	10 687	10 081	14 599	18 202	12 799
South Africa	7 099	7 837	12 014	23 850	-	12 700
Turkey	10 973	7 273	6 451	14 008	18 627	11 466
Pakistan	5 890	6 543	8 568	15 079	16 253	10 467
Egypt	8 062	14 323	3 216	8 685	16 418	10 141
Tunisia	6 148	6 257	7 746	14 516	11 192	9 172
Kuwait	-	6 022	9 651	10 703	9 355	8 933
Lebanon	4 907	6 819	7 233	9 418	10 971	7 870
Total	2 603 995	3 144 416	4 318 398	5 178 139	4 359 177	3 920 825

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Table B.I.4.4.b. Imports of copper and copper alloys, worked, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
France	14.18	12.83	12.24	11.78	9.24	11.80
Germany, Fed. Rep. of	11.93	10.85	11.82	12.87	10.45	11.65
United States	11.67	13.38	10.89	7.22	12.45	10.77
Italy	5.19	5.46	7.07	8.65	6.06	6.75
United Kingdom	3.97	5.36	7.75	5.89	5.96	5.97
Netherlands	6.84	6.26	6.35	6.06	4.45	5.90
Switzerland	4.14	4.40	4.80	5.23	4.49	4.69
Austria	2.54	2.67	3.06	3.38	3.24	3.05
Belgium/Luxembourg	3.16	3.44	3.13	2.85	2.37	2.94
Sweden	2.91	2.78	2.73	2.65	2.28	2.64
Iran (Islamic Rep. of)	3.60	3.09	1.14	2.03	2.21	2.25
Spain	2.12	1.57	2.00	2.09	2.67	2.12
Denmark	2.31	2.05	2.44	2.08	1.60	2.08
Canada	2.26	1.81	1.74	1.65	2.49	1.96
Hong Kong	1.94	1.74	1.82	2.03	2.00	1.92
Norway	2.10	1.75	1.75	1.77	1.77	1.80
Singapore	1.23	1.15	1.32	1.65	1.80	1.47
Korea, Rep. of	0.94	1.20	1.39	1.03	1.30	1.18
Venezuela	1.46	1.34	1.15	0.89	1.09	1.14
Algeria	0.95	1.02	0.93	1.06	1.52	1.11
Malaysia	0.67	0.66	0.83	1.23	1.77	1.10
Israel	1.18	1.24	1.09	0.90	1.11	1.08
Ireland	1.01	0.97	1.03	1.07	1.01	1.02
Saudi Arabia	0.57	0.71	0.81	1.07	1.14	0.90
Finland	0.75	0.66	0.77	1.07	1.02	0.88
India	0.44	0.71	0.49	0.97	1.30	0.83
Portugal	0.77	0.68	0.70	0.90	0.36	0.82
Indonesia	0.96	0.99	0.80	0.48	0.64	0.73
Thailand	0.72	0.72	0.78	0.69	0.72	0.72
New Zealand	0.75	0.77	0.65	0.61	0.69	0.68
Mexico	0.14	0.15	0.64	1.07	0.87	0.66
Cuba	0.17	0.61	0.82	0.61	0.83	0.65
Nigeria	0.47	0.60	0.41	0.72	0.78	0.61
Colombia	0.41	0.56	0.43	0.60	0.90	0.60
Australia	0.51	0.49	0.46	0.44	0.67	0.52
United Arab Emirates	0.27	0.85	0.18	0.54	0.66	0.50
Morocco	0.52	0.46	0.40	0.44	0.52	0.46
Syrian Arab Republic	0.80	0.31	0.29	0.40	0.58	0.45
Yugoslavia	0.51	0.55	0.45	0.25	0.53	0.44
Iraq	0.23	0.45	0.21	0.36	0.60	0.38
Philippines	0.34	0.33	0.30	0.28	0.57	0.37
Japan	0.33	0.27	0.44	0.32	0.39	0.36
Brazil	0.40	0.34	0.23	0.28	0.42	0.33
South Africa	0.27	0.25	0.28	0.46	0.00	0.32
Turkey	0.42	0.23	0.15	0.27	0.43	0.29
Pakistan	0.23	0.21	0.20	0.29	0.37	0.27
Egypt	0.31	0.46	0.07	0.17	0.38	0.26
Tunisia	0.24	0.20	0.18	0.28	0.26	0.23
Kuwait	0.00	0.19	0.22	0.21	0.21	0.23
Lebanon	0.19	0.22	0.17	0.18	0.25	0.20
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.5.a. Imports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Japan	274 575	179 108	287 232	449 412	334 859	305 037
Norway	168 347	110 484	224 123	333 781	280 647	223 476
United States	78 041	132 154	124 315	212 137	265 297	162 389
United Kingdom	184 318	84 220	96 477	156 528	184 874	141 283
Germany, Fed. Rep. of	58 844	60 752	66 046	82 196	71 870	67 942
France	71 968	51 717	41 305	69 666	85 201	63 971
Finland	7 848	7 169	31 265	38 607	30 825	23 143
Canada	36 724	14 997	28 098	21 304	14 180	23 061
Italy	22 408	27 274	22 830	15 786	10 730	19 806
Sweden	10 289	20 287	16 136	26 383	19 418	18 503
Netherlands	2 994	12 607	19 639	22 393	16 005	14 728
Spain	3 627	9 193	9 323	9 350	13 463	8 991
Australia	10 896	5 326	10 513	9 765	1	7 300
Mexico	13 612	12 349	841	1 074	2 581	6 091
Austria	5 083	5 062	6 669	7 416	4 373	5 721
South Africa	7 037	3 632	-	-	-	5 335
Brazil	6	1 155	7 647	14 255	288	4 670
Turkey	2 003	1 469	842	2 042	3 362	1 944
Belgium/Luxembourg	1 118	1 605	1 581	1 907	2 714	1 785
India	-	2	11	4 201	567	1 195
New Zealand	30	5 391	221	246	4	1 178
Yugoslavia	718	391	956	518	727	662
Indonesia	13	4	0	20	3 211	650
Portugal	659	479	410	231	256	407
Switzerland	431	286	164	206	365	290
Korea, Rep. of	310	316	357	199	0	236
Pakistan	54	7	182	214	288	149
Tunisia	1	15	418	12	-	112
Denmark	18	99	188	148	31	97
Philippines	-	89	-	-	-	89
Zaire	-	-	-	81	-	81
Israel	56	56	59	10	174	71
Ireland	3	88	31	53	145	64
Egypt	32	158	5	31	92	64
Iran (Islamic Rep. of)	-	36	-	75	-	56
Venezuela	23	1	82	50	-	39
Saudi Arabia	2	5	77	109	0	39
Thailand	-	21	11	67	-	33
Morocco	23	33	26	46	-	32
Syrian Arab Republic	-	30	-	-	-	30
Malaysia	19	15	31	58	9	26
Colombia	-	46	4	-	-	25
Sri Lanka	5	-	1	7	31	11
Dominican Republic	2	-	-	14	16	11
Singapore	3	-	7	26	5	10
Guyana	-	-	5	-	-	5
Uruguay	-	-	-	4	-	4
Malawi	-	4	-	-	-	4
Kenya	1	6	-	-	-	4
Jamaica	-	2	-	-	-	2
Total	962 141	748 140	998 128	1 480 628	1 346 609	1 110 850

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Table B.I.4.5.b. Imports of nickel ores and concentrates, nickel mattes, nickel sinters and other intermediate products of nickel metallurgy, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Japan	28.54	23.94	28.78	30.35	24.87	27.46
Norway	17.50	14.77	22.45	22.54	20.84	20.12
United States	8.11	17.66	12.45	14.33	19.70	14.62
United Kingdom	19.16	11.26	9.67	10.57	13.73	12.72
Germany, Fed. Rep. of	6.12	8.12	6.62	5.55	5.34	6.12
France	7.48	6.91	4.14	4.71	6.33	5.76
Finland	0.82	0.96	3.13	2.61	2.29	2.08
Canada	3.82	2.00	2.82	1.44	1.05	2.08
Italy	2.33	3.65	2.29	1.07	0.80	1.78
Sweden	1.07	2.71	1.62	1.78	1.44	1.67
Netherlands	0.31	1.69	1.97	1.51	1.19	1.33
Spain	0.38	1.23	0.93	0.63	1.00	0.81
Australia	1.13	0.71	1.05	0.66	0.00	0.66
Mexico	1.41	1.65	0.08	0.07	0.19	0.55
Austria	0.53	0.68	0.67	0.50	0.32	0.51
South Africa	0.73	0.49	0.00	0.00	0.00	0.48
Brazil	0.00	0.15	0.77	0.96	0.02	0.42
Turkey	0.21	0.20	0.08	0.14	0.25	0.17
Belgium/Luxembourg	0.12	0.21	0.16	0.13	0.20	0.16
India	0.00	0.00	0.00	0.28	0.04	0.11
New Zealand	0.00	0.72	0.02	0.02	0.00	0.11
Yugoslavia	0.07	0.05	0.10	0.03	0.05	0.06
Indonesia	0.00	0.00	0.00	0.00	0.24	0.06
Portugal	0.07	0.06	0.04	0.02	0.02	0.04
Switzerland	0.04	0.04	0.02	0.01	0.03	0.03
Korea, Rep. of	0.03	0.04	0.04	0.01	0.00	0.02
Pakistan	0.01	0.00	0.02	0.01	0.02	0.01
Tunisia	0.00	0.00	0.04	0.00	0.00	0.01
Denmark	0.00	0.01	0.02	0.01	0.00	0.01
Philippines	0.00	0.01	0.00	0.00	0.00	0.01
Zaire	0.00	0.00	0.00	0.01	0.00	0.01
Israel	0.01	0.01	0.01	0.00	0.01	0.01
Ireland	0.00	0.01	0.00	0.00	0.01	0.01
Egypt	0.00	0.02	0.00	0.00	0.01	0.01
Iran (Islamic Rep. of)	0.00	0.00	0.00	0.01	0.00	0.00
Venezuela	0.00	0.00	0.01	0.00	0.00	0.00
Saudi Arabia	0.00	0.00	0.01	0.01	0.00	0.00
Thailand	0.00	0.00	0.00	0.00	0.00	0.00
Morocco	0.00	0.00	0.00	0.00	0.00	0.00
Syrian Arab Republic	0.00	0.00	0.00	0.00	0.00	0.00
Malaysia	0.00	0.00	0.00	0.00	0.00	0.00
Colombia	0.00	0.01	0.00	0.00	0.00	0.00
Sri Lanka	0.00	0.00	0.00	0.00	0.00	0.00
Dominican Republic	0.00	0.00	0.00	0.00	0.00	0.00
Singapore	0.00	0.00	0.00	0.00	0.00	0.00
Guyana	0.00	0.00	0.00	0.00	0.00	0.00
Uruguay	0.00	0.00	0.00	0.00	0.00	0.00
Malawi	0.00	0.00	0.00	0.00	0.00	0.00
Kenya	0.00	0.00	0.00	0.00	0.00	0.00
Jamaica	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.6.a. Imports of nickel and nickel alloys, unwrought, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
United States	456 109	597 490	513 032	729 584	736 213	606 486
Germany, Fed. Rep. of	176 494	165 761	251 760	268 220	256 653	223 778
France	60 003	69 210	113 654	167 442	139 903	110 042
United Kingdom	94 417	67 494	98 221	128 724	115 932	100 958
Japan	51 271	46 953	101 236	107 989	116 178	84 725
Italy	53 759	50 619	83 001	124 866	79 986	78 446
Sweden	39 407	35 285	59 648	75 931	54 001	52 854
Spain	42 757	25 359	28 039	37 352	23 989	31 499
Brazil	11 840	13 815	16 459	41 221	35 435	23 754
Netherlands	11 879	17 254	27 080	37 155	24 413	23 556
Canada	11 663	7 851	20 183	28 886	31 639	20 044
India	22 451	15 936	10 098	14 389	16 294	15 834
Hong Kong	3 638	8 798	12 188	24 219	30 053	15 779
Belgium/Luxembourg	7 585	12 683	22 208	20 443	15 715	15 727
Finland	5 418	9 874	14 195	28 924	15 989	14 880
Austria	11 121	10 794	14 725	15 933	16 328	13 780
Korea, Rep. of	2 887	5 188	9 184	19 315	26 326	12 580
Malaysia	374	15 332	22 197	12 454	4 563	10 984
Yugoslavia	8 601	6 272	8 165	13 684	14 805	10 305
Mexico	-	3 477	11 520	16 464	9 190	10 163
Australia	5 152	14 527	4 475	11 233	9 701	9 018
Switzerland	6 085	6 448	8 226	9 082	7 231	7 414
South Africa	2 805	8 512	2 998	3 494	-	4 452
Argentina	3 443	2 954	4 573	4 753	3 970	3 939
Chile	266	580	3 877	2 784	2 343	1 970
Portugal	670	936	828	4 556	2 460	1 890
Singapore	688	655	1 039	2 774	4 000	1 831
Thailand	3	74	1 501	2 533	2 763	1 375
Ireland	830	1 432	621	1 493	1 405	1 156
Denmark	774	842	1 022	1 284	779	940
Venezuela	563	567	973	1 220	1 000	865
Greece	568	966	919	1 143	296	778
Colombia	232	274	541	888	1 861	759
Norway	1 042	237	464	594	1 228	713
Iran (Islamic Rep. of)	321	614	339	1 265	683	644
Philippines	266	331	435	658	916	521
Israel	285	423	365	570	881	505
New Zealand	241	305	318	109	795	354
Pakistan	171	203	303	393	340	282
Peru	347	110	345	220	236	252
Egypt	-	206	451	56	133	212
Niger	-	141	-	-	-	141
Turkey	155	5	18	501	25	141
Guatemala	258	19	254	8	28	113
Ghana	201	199	-	24	22	112
Indonesia	5	85	187	109	59	89
Uruguay	-	16	87	43	210	89
Syrian Arab Republic	65	84	92	63	61	73
Algeria	-	-	86	74	11	57
Ecuador	2	88	17	112	48	53
Total	1 096 426	1 226 782	1 471 406	1 964 297	1 806 626	1 513 107

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Table B.I.4.6.b. Imports of nickel and nickel alloys, unwrought, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
United States	41.60	48.70	34.87	37.14	40.75	40.08
Germany, Fed. Rep. of	16.10	13.51	17.11	13.65	14.21	14.79
France	5.47	5.64	7.72	8.52	7.74	7.27
United Kingdom	8.61	5.50	6.68	6.55	6.42	6.67
Japan	4.68	3.83	6.88	5.50	6.43	5.60
Italy	4.90	4.13	5.64	6.36	4.43	5.18
Sweden	3.59	2.88	4.05	3.87	2.99	3.49
Spain	3.90	2.07	1.91	1.90	1.33	2.08
Brazil	1.08	1.13	1.12	2.10	1.96	1.57
Netherlands	1.08	1.41	1.84	1.89	1.35	1.56
Canada	1.06	0.64	1.37	1.47	1.75	1.32
India	2.05	1.30	0.69	0.73	0.90	1.05
Hong Kong	0.33	0.72	0.83	1.23	1.66	1.04
Belgium/Luxembourg	0.69	1.03	1.51	1.04	0.87	1.04
Finland	0.49	0.80	0.96	1.47	0.89	0.98
Austria	1.01	0.88	1.00	0.81	0.90	0.91
Korea, Rep. of	0.26	0.42	0.62	0.98	1.46	0.83
Malaysia	0.03	1.25	1.51	0.63	0.25	0.73
Yugoslavia	0.78	0.51	0.55	0.70	0.82	0.68
Mexico	0.00	0.28	0.78	0.84	0.51	0.67
Australia	0.47	1.18	0.30	0.57	0.54	0.60
Switzerland	0.55	0.53	0.56	0.46	0.40	0.49
South Africa	0.26	0.69	0.20	0.18	0.00	0.29
Argentina	0.31	0.24	0.31	0.24	0.22	0.26
Chile	0.02	0.05	0.26	0.14	0.13	0.13
Portugal	0.06	0.08	0.06	0.23	0.14	0.12
Singapore	0.06	0.05	0.07	0.14	0.22	0.12
Thailand	0.00	0.01	0.10	0.13	0.15	0.09
Ireland	0.08	0.12	0.04	0.08	0.08	0.08
Denmark	0.07	0.07	0.07	0.07	0.04	0.06
Venezuela	0.05	0.05	0.07	0.06	0.06	0.06
Greece	0.05	0.08	0.06	0.06	0.02	0.05
Colombia	0.02	0.02	0.04	0.05	0.10	0.05
Norway	0.10	0.02	0.03	0.03	0.07	0.05
Iran (Islamic Rep. of)	0.03	0.05	0.02	0.06	0.04	0.04
Philippines	0.02	0.03	0.03	0.03	0.05	0.03
Israel	0.03	0.03	0.02	0.03	0.05	0.03
New Zealand	0.02	0.02	0.02	0.01	0.04	0.02
Pakistan	0.02	0.02	0.02	0.02	0.02	0.02
Peru	0.03	0.01	0.02	0.01	0.01	0.02
Egypt	0.00	0.02	0.03	0.00	0.01	0.01
Niger	0.00	0.01	0.00	0.00	0.00	0.01
Turkey	0.01	0.00	0.00	0.03	0.00	0.01
Guatemala	0.02	0.00	0.02	0.00	0.00	0.01
Ghana	0.02	0.02	0.00	0.00	0.00	0.01
Indonesia	0.00	0.01	0.01	0.01	0.00	0.01
Uruguay	0.00	0.00	0.01	0.00	0.01	0.01
Syrian Arab Republic	0.01	0.01	0.01	0.00	0.00	0.00
Algeria	0.00	0.00	0.01	0.00	0.00	0.00
Ecuador	0.00	0.01	0.00	0.01	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.7.a. Imports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
United States	557 140	702 619	630 819	885 238	869 119	728 987
Germany, Fed. Rep. of	210 599	206 842	311 797	344 732	317 052	278 204
France	109 832	121 286	170 957	238 343	211 029	170 289
United Kingdom	121 563	101 493	150 785	199 922	159 325	146 618
Japan	69 174	66 237	133 759	154 661	147 192	114 205
Italy	72 168	72 862	114 936	166 120	113 057	107 829
Sweden	54 437	42 507	70 897	87 154	67 254	64 450
Canada	53 312	43 839	76 167	63 933	74 643	62 379
Spain	52 812	32 802	35 834	49 547	29 267	40 052
Netherlands	27 811	27 526	43 589	52 767	37 617	37 862
Brazil	21 664	23 233	28 278	49 244	41 513	32 786
Belgium/Luxembourg	24 105	31 705	37 624	38 870	27 575	31 976
Switzerland	22 257	22 117	27 767	35 843	30 690	27 735
India	28 998	29 983	24 322	23 085	21 621	25 602
Austria	19 029	17 044	22 047	23 942	21 958	20 804
Hong Kong	5 592	11 378	16 246	28 518	34 362	19 219
Mexico	5 217	8 908	23 908	32 986	22 444	18 693
Australia	11 356	22 336	12 935	24 860	20 622	18 422
Yugoslavia	15 293	12 831	14 989	21 889	24 592	17 919
Malaysia	1 775	21 796	29 261	15 621	18 931	17 477
Korea, Rep. of	6 233	8 799	15 798	24 463	32 001	17 459
Finland	6 357	10 500	15 340	30 908	17 635	16 148
South Africa	7 434	12 906	8 528	15 336	17 245	12 290
Indonesia	1 106	6 345	6 498	12 152	23 099	9 840
Argentina	6 240	4 815	7 248	7 709	7 542	6 711
Thailand	3 253	1 759	4 324	6 975	10 994	5 461
Malta	3 383	3 271	6 007	7 137	6 036	5 167
Portugal	4 328	3 898	3 604	8 248	5 256	5 067
Israel	2 369	2 452	3 683	5 190	5 417	3 822
Morocco	3 588	2 486	2 755	4 782	4 843	3 691
Singapore	2 349	3 100	2 259	4 274	5 964	3 589
Ireland	1 874	4 186	3 040	4 301	3 841	3 448
Venezuela	1 778	2 492	4 157	3 923	3 900	3 250
Denmark	2 416	2 615	3 255	3 976	2 747	3 002
Norway	2 788	1 788	2 528	3 749	3 505	2 872
Chile	596	1 124	5 048	3 300	2 818	2 577
Iran (Islamic Rep. of)	1 991	-	1 562	3 100	2 898	2 388
United Arab Emirates	1 482	6 869	1 038	817	860	2 213
Colombia	1 442	1 520	2 047	2 802	3 126	2 187
New Zealand	2 123	1 899	2 190	1 690	2 179	2 016
Greece	1 246	1 661	1 524	1 805	811	1 409
Philippines	996	1 009	1 063	1 588	1 521	1 235
Pakistan	933	1 026	836	1 558	1 678	1 206
Ivory Coast	1 026	1 590	1 351	97	1 846	1 182
Saudi Arabia	2 514	1 470	389	693	778	1 169
Cuba	-	1 328	884	1 047	1 197	1 114
Peru	810	632	784	1 204	1 575	1 001
Turkey	905	645	880	950	1 483	973
Egypt	155	474	2 984	267	537	883
Nigeria	139	1 657	1 687	261	250	799
Total	1 555 694	1 711 529	2 085 537	2 701 049	2 462 658	2 103 293

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Table B.I.4.7.b. Imports of nickel and nickel alloys, unwrought and worked, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
United States	35.81	41.05	30.25	32.77	35.29	34.66
Germany, Fed. Rep. of	13.54	12.09	14.95	12.76	12.87	13.23
France	7.06	7.09	8.20	8.82	8.57	8.10
United Kingdom	7.81	5.93	7.23	7.40	6.47	6.97
Japan	4.45	3.87	6.41	5.73	5.98	5.43
Italy	4.64	4.26	5.51	6.15	4.59	5.13
Sweden	3.50	2.48	3.40	3.23	2.73	3.06
Canada	3.43	2.56	3.65	2.37	3.03	2.97
Spain	3.39	1.92	1.72	1.83	1.19	1.90
Netherlands	1.79	1.61	2.09	1.95	1.53	1.80
Brazil	1.39	1.36	1.36	1.82	1.69	1.56
Belgium/Luxembourg	1.55	1.85	1.80	1.44	1.12	1.52
Switzerland	1.43	1.29	1.33	1.33	1.25	1.32
India	1.86	1.75	1.17	0.85	0.88	1.22
Austria	1.22	1.00	1.06	0.89	0.89	0.99
Hong Kong	0.36	0.66	0.78	1.06	1.40	0.91
Mexico	0.34	0.52	1.15	1.22	0.91	0.89
Australia	0.73	1.31	0.62	0.92	0.84	0.88
Yugoslavia	0.98	0.75	0.72	0.81	1.00	0.85
Malaysia	0.11	1.27	1.40	0.58	0.77	0.83
Korea, Rep. of	0.40	0.51	0.76	0.91	1.30	0.83
Finland	0.41	0.61	0.74	1.14	0.72	0.77
South Africa	0.48	0.75	0.41	0.57	0.70	0.58
Indonesia	0.07	0.37	0.31	0.45	0.94	0.47
Argentina	0.40	0.28	0.35	0.29	0.31	0.32
Thailand	0.21	0.10	0.21	0.26	0.45	0.26
Malta	0.22	0.19	0.29	0.26	0.25	0.25
Portugal	0.28	0.23	0.17	0.31	0.21	0.24
Israel	0.15	0.14	0.18	0.19	0.22	0.18
Morocco	0.23	0.15	0.13	0.18	0.20	0.18
Singapore	0.15	0.18	0.11	0.16	0.24	0.17
Ireland	0.12	0.24	0.15	0.16	0.16	0.16
Venezuela	0.11	0.15	0.20	0.15	0.16	0.15
Denmark	0.16	0.15	0.16	0.15	0.11	0.14
Norway	0.18	0.10	0.12	0.14	0.14	0.14
Chile	0.04	0.07	0.24	0.12	0.11	0.12
Iran (Islamic Rep. of)	0.13	0.00	0.07	0.11	0.12	0.11
United Arab Emirates	0.10	0.40	0.05	0.03	0.03	0.11
Colombia	0.09	0.09	0.10	0.10	0.13	0.10
New Zealand	0.14	0.11	0.11	0.06	0.09	0.10
Greece	0.08	0.10	0.07	0.07	0.03	0.07
Philippines	0.06	0.06	0.05	0.06	0.06	0.06
Pakistan	0.06	0.06	0.04	0.06	0.07	0.06
Ivory Coast	0.07	0.09	0.06	0.00	0.07	0.06
Saudi Arabia	0.16	0.09	0.02	0.03	0.03	0.06
Cuba	0.00	0.08	0.04	0.04	0.05	0.05
Peru	0.05	0.04	0.04	0.04	0.06	0.05
Turkey	0.06	0.04	0.04	0.04	0.06	0.05
Egypt	0.01	0.03	0.14	0.01	0.02	0.04
Nigeria	0.01	0.10	0.08	0.01	0.01	0.04
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.8. Imports of cobalt, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981)
United States	97 900	219 400	491 600	407 600	307 700	304 840
Other countries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
World	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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Table B.I.4.9.a. Imports of manganese ore and concentrates, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
Japan	142 234	102 248	143 551	189 042	160 501	147 515
France	61 979	61 625	81 921	92 466	66 046	72 807
United States	56 697	41 058	32 609	59 161	56 742	49 253
Norway	39 836	45 330	49 817	55 952	37 037	45 594
Spain	30 517	25 760	32 551	33 150	20 619	28 519
Germany, Fed. Rep. of	16 593	28 045	29 317	22 942	30 842	25 548
Italy	16 050	17 343	26 193	28 206	25 713	22 701
United Kingdom	22 655	17 596	33 541	10 298	16 946	20 207
Belgium/Luxembourg	13 037	16 443	25 997	21 016	17 737	18 846
Canada	8 480	15 603	7 128	15 032	18 040	12 857
Korea, Rep. of	4 056	7 930	12 443	13 851	20 635	11 783
Portugal	11 639	8 721	11 532	11 669	7 452	10 203
Singapore	3 342	6 982	6 443	13 325	18 129	9 644
Yugoslavia	8 483	6 373	7 777	10 941	7 305	8 176
Netherlands	6 869	6 597	8 554	5 975	6 071	6 813
Brazil	5 544	5 846	8 467	4 607	3 339	5 561
Argentina	7 448	2 756	5 750	4 653	408	4 203
Mexico	4 645	2 636	1 043	3 524	8 783	4 126
Indonesia	1 953	2 017	1 949	3 245	2 503	2 333
Malaysia	560	552	760	819	7 938	2 126
India	1 025	945	1 318	2 600	3 108	1 799
South Africa	1 279	1 007	2 336	1 337	-	1 490
Ireland	1 299	1 983	1 667	1 759	423	1 426
Iran (Islamic Rep. of)	-	1 741	940	2 106	629	1 354
Philippines	1 262	1 252	937	1 887	1 010	1 270
Guatemala	-	698	656	672	1 653	920
Colombia	936	472	421	1 498	643	794
Greece	60	1 033	404	2 205	3	741
Finland	599	929	1 082	884	63	711
Kenya	559	495	1 234	620	469	675
Venezuela	22	220	24	2 173	45	497
Madagascar	-	0	1 409	0	-	470
Sri Lanka	-	386	461	374	506	432
Nepal	-	428	428	-	-	428
Sudan	311	450	304	553	513	426
Australia	372	431	32	747	512	419
Sweden	490	283	879	122	273	409
Nigeria	-	339	70	536	550	374
Thailand	691	397	655	8	2	351
Ivory Coast	263	375	416	297	330	336
Turkey	140	382	409	458	213	320
Zimbabwe	285	283	322	-	-	297
Egypt	-	9	780	199	143	283
Israel	-	0	224	390	423	259
Denmark	335	335	268	208	144	258
Peru	-	0	233	354	401	247
Jamaica	265	350	191	262	149	243
Dominican Republic	57	172	269	416	191	221
Morocco	143	139	162	330	60	167
Cameroon	34	2	483	2	-	130
Total	473 044	436 997	546 357	622 871	545 242	524 902

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Table B.I.4.9.b. Imports of manganese ore and concentrates, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
Japan	30.07	23.40	26.27	30.35	29.44	28.10
France	13.10	14.10	14.99	14.85	12.11	13.87
United States	11.99	9.40	5.97	9.50	10.41	9.38
Norway	8.42	10.37	9.12	8.98	6.79	8.69
Spain	6.45	5.89	5.96	5.32	3.78	5.43
Germany, Fed. Rep. of	3.51	6.42	5.37	3.68	5.66	4.87
Italy	3.39	3.97	4.79	4.53	4.72	4.32
United Kingdom	4.79	4.03	6.14	1.65	3.11	3.85
Belgium/Luxembourg	2.76	3.76	4.76	3.37	3.25	3.59
Canada	1.79	3.57	1.30	2.41	3.31	2.45
Korea, Rep. of	0.86	1.81	2.28	2.22	3.78	2.24
Portugal	2.46	2.00	2.11	1.87	1.37	1.94
Singapore	0.71	1.60	1.18	2.14	3.32	1.84
Yugoslavia	1.79	1.46	1.42	1.76	1.34	1.56
Netherlands	1.45	1.51	1.57	0.96	1.11	1.30
Brazil	1.17	1.34	1.55	0.74	0.61	1.06
Argentina	1.57	0.63	1.05	0.75	0.07	0.80
Mexico	0.98	0.60	0.19	0.57	1.61	0.79
Indonesia	0.41	0.46	0.36	0.52	0.46	0.44
Malaysia	0.12	0.13	0.14	0.13	1.46	0.40
India	0.22	0.22	0.24	0.42	0.57	0.34
South Africa	0.27	0.23	0.43	0.21	0.00	0.28
Ireland	0.27	0.45	0.31	0.28	0.08	0.27
Iran (Islamic Rep. of)	0.00	0.40	0.17	0.34	0.12	0.26
Philippines	0.27	0.29	0.17	0.30	0.19	0.24
Guatemala	0.00	0.16	0.12	0.11	0.30	0.18
Colombia	0.20	0.11	0.08	0.24	0.12	0.15
Greece	0.01	0.24	0.07	0.35	0.00	0.14
Finland	0.13	0.21	0.20	0.14	0.01	0.14
Kenya	0.12	0.11	0.23	0.10	0.09	0.13
Venezuela	0.00	0.05	0.00	0.35	0.01	0.09
Madagascar	0.00	0.00	0.26	0.00	0.00	0.09
Sri Lanka	0.00	0.09	0.08	0.06	0.09	0.08
Nepal	0.00	0.10	0.08	0.00	0.00	0.08
Sudan	0.07	0.10	0.06	0.09	0.09	0.08
Australia	0.08	0.10	0.01	0.12	0.09	0.08
Sweden	0.10	0.06	0.16	0.02	0.05	0.08
Nigeria	0.00	0.08	0.01	0.09	0.10	0.07
Thailand	0.15	0.09	0.12	0.00	0.00	0.07
Ivory Coast	0.06	0.09	0.08	0.05	0.06	0.06
Turkey	0.03	0.09	0.07	0.07	0.04	0.06
Zimbabwe	0.06	0.06	0.06	0.00	0.00	0.06
Egypt	0.00	0.00	0.14	0.03	0.03	0.05
Israel	0.00	0.00	0.04	0.06	0.08	0.05
Denmark	0.07	0.08	0.05	0.03	0.03	0.05
Peru	0.00	0.00	0.04	0.06	0.07	0.05
Jamaica	0.06	0.08	0.03	0.04	0.03	0.05
Dominican Republic	0.01	0.04	0.05	0.07	0.04	0.04
Morocco	0.03	0.03	0.03	0.05	0.01	0.03
Cameroon	0.01	0.00	0.09	0.00	0.00	0.02
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Table B.I.4.10.a. Imports of ferro-manganese, by country, 1977-1981

C.I.F. value in thousands of US dollars 1/

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 2/
United States	157 180	187 470	272 107	225 947	243 159	217 173
Germany, Fed. Rep. of	54 348	63 187	71 575	66 296	40 902	59 262
Italy	47 951	41 422	52 627	58 183	45 967	49 230
United Kingdom	37 047	35 266	42 938	30 334	27 426	34 602
Belgium/Luxembourg	23 693	29 962	38 110	35 305	35 342	32 482
Canada	13 000	11 927	38 666	12 858	25 241	20 338
France	12 420	11 027	19 831	22 749	12 852	15 776
Sweden	8 461	12 412	18 809	16 238	13 611	13 906
Venezuela	8 913	12 841	11 595	15 274	1 248	9 974
Austria	7 031	7 855	12 878	12 016	9 548	9 866
Netherlands	8 191	9 520	11 144	8 601	7 766	9 044
Turkey	7 205	7 157	4 294	10 275	8 870	7 560
Australia	1 837	3 278	9 163	4 991	2 889	4 432
Qatar	-	-	-	3 985	3 905	3 945
Switzerland	-	4 621	2 886	3 929	-	3 812
Japan	1 585	4 757	6 632	1 065	2 668	3 341
Denmark	1 843	3 171	2 821	2 654	1 373	2 372
Korea, Rep. of	1 302	2 136	2 054	893	3 703	2 018
Colombia	1 085	1 015	2 096	3 437	1 917	1 910
Finland	783	1 179	2 050	2 510	1 777	1 660
Iran (Islamic Rep. of)	1 346	2 996	2 842	379	493	1 611
Philippines	745	1 072	2 431	1 634	2 172	1 611
Thailand	847	831	1 266	2 323	2 131	1 480
Peru	964	812	2 291	1 724	1 510	1 460
Pakistan	1 177	518	2 569	1 528	1 392	1 437
Greece	1 268	906	1 548	1 443	1 281	1 289
Indonesia	564	944	2 037	1 475	1 397	1 283
Algeria	523	226	1 279	1 669	2 603	1 260
Argentina	819	319	524	1 335	3 142	1 228
Panama	-	-	2 408	-	9	1 209
Bangladesh	-	7	954	1 484	1 948	1 098
Cuba	193	1 740	1 343	-	-	1 092
Mexico	161	933	1 471	374	2 388	1 065
Zimbabwe	1 115	620	1 436	-	-	1 057
Malaysia	668	904	1 704	1 706	222	1 041
Singapore	54	637	2 485	1 619	303	1 020
Saudi Arabia	-	-	790	-	-	790
Ghana	1 124	1 073	549	571	534	770
Yugoslavia	483	666	971	993	619	746
New Zealand	543	1 037	840	557	473	690
Egypt	-	106	4	1 806	827	686
Israel	686	451	718	583	458	579
Spain	214	149	127	1 928	301	544
Iraq	-	77	227	750	1 008	516
United Arab Emirates	-	11	18	1 314	97	360
Ireland	225	393	310	204	298	286
Nigeria	228	134	376	281	341	272
El Salvador	-	31	622	13	154	205
India	14	111	8	465	139	147
Lebanon	-	504	8	16	15	136
Total	407 836	468 411	656 432	565 714	516 419	522 962

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Table B.I.4.10.b. Imports of ferro-manganese, by country, 1977-1981

Percentage of total

Country	1977	1978	1979	1980	1981	5-year average (1977-1981) 3/
United States	38.54	40.02	41.45	39.94	47.09	41.53
Germany, Fed. Rep. of	13.33	13.49	10.90	11.72	7.92	11.33
Italy	11.76	8.84	8.02	10.28	8.90	9.41
United Kingdom	9.08	7.53	6.54	5.36	5.31	6.62
Belgium/Luxembourg	5.81	6.40	5.81	6.24	6.84	6.21
Canada	3.19	2.55	5.89	2.27	4.89	3.89
France	3.05	2.35	3.02	4.02	2.49	3.02
Sweden	2.07	2.65	2.87	2.87	2.64	2.66
Venezuela	2.19	2.74	1.77	2.70	0.24	1.91
Austria	1.72	1.68	1.96	2.12	1.85	1.89
Netherlands	2.01	2.03	1.70	1.52	1.50	1.73
Turkey	1.77	1.53	0.65	1.82	1.72	1.45
Australia	0.45	0.70	1.40	0.88	0.56	0.85
Qatar	0.00	0.00	0.00	0.70	0.76	0.75
Switzerland	0.00	0.99	0.44	0.69	0.00	0.73
Japan	0.39	1.02	1.01	0.19	0.52	0.64
Denmark	0.45	0.68	0.43	0.47	0.27	0.45
Korea, Rep. of	0.32	0.46	0.31	0.16	0.72	0.39
Colombia	0.27	0.22	0.32	0.61	0.37	0.37
Finland	0.19	0.25	0.31	0.44	0.34	0.32
Iran (Islamic Rep. of)	0.33	0.64	0.43	0.07	0.10	0.31
Philippines	0.18	0.23	0.37	0.29	0.42	0.31
Thailand	0.21	0.18	0.19	0.41	0.41	0.28
Peru	0.24	0.17	0.35	0.30	0.29	0.28
Pakistan	0.29	0.11	0.39	0.27	0.27	0.27
Greece	0.31	0.19	0.24	0.26	0.25	0.25
Indonesia	0.14	0.20	0.31	0.26	0.27	0.25
Algeria	0.13	0.05	0.19	0.30	0.50	0.24
Argentina	0.20	0.07	0.08	0.24	0.61	0.23
Panama	0.00	0.00	0.37	0.00	0.00	0.23
Bangladesh	0.00	0.00	0.15	0.26	0.38	0.21
Cuba	0.05	0.37	0.20	0.00	0.00	0.21
Mexico	0.04	0.20	0.22	0.07	0.46	0.20
Zimbabwe	0.27	0.13	0.22	0.00	0.00	0.20
Malaysia	0.16	0.19	0.26	0.30	0.04	0.20
Singapore	0.01	0.14	0.38	0.29	0.06	0.19
Saudi Arabia	0.00	0.00	0.12	0.00	0.00	0.15
Ghana	0.28	0.23	0.08	0.10	0.10	0.15
Yugoslavia	0.12	0.14	0.15	0.18	0.12	0.14
New Zealand	0.13	0.22	0.13	0.10	0.09	0.13
Egypt	0.00	0.02	0.00	0.32	0.16	0.13
Israel	0.17	0.10	0.11	0.10	0.09	0.11
Spain	0.05	0.03	0.02	0.34	0.06	0.10
Iraq	0.00	0.02	0.03	0.13	0.20	0.10
United Arab Emirates	0.00	0.00	0.00	0.23	0.02	0.07
Ireland	0.06	0.08	0.05	0.04	0.06	0.05
Nigeria	0.06	0.03	0.06	0.05	0.07	0.05
El Salvador	0.00	0.01	0.09	0.00	0.03	0.04
India	0.00	0.02	0.00	0.08	0.03	0.03
Lebanon	0.00	0.11	0.00	0.00	0.00	0.03
Total	100.00	100.00	100.00	100.00	100.00	100.00

(Sources and footnotes on following page)

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(Sources and footnotes to tables B.I.4.9.b, B.I.4.10.a and B.I.4.10.b)

Sources: Except for cobalt, United Nations, Department of International Economic and Social Affairs, Statistical Office, 1981 Yearbook of International Trade Statistics, vol. II, Trade by Commodity, Commodity Matrix Tables, (United Nations, New York 1982), pp. 363, 376, 569, 572, 365, 576, 157, 371, 539, respectively. Cobalt exports: Zaire and Philippines - International Monetary Fund, International Financial Statistics; Zambia - Zambia Yearbook; Cobalt imports: United States - United States Department of the Interior, Bureau of Mines, Mineral Commodity Profiles 1983, Cobalt.

1/ The corresponding SITC code numbers are, respectively, 287.1, 288.21, 682.1, 682.2, 287.2, 683.1, 683, part of 287.99 + 689.99 + 699.99, 287.7, 671.61.

2/ Average of 5 years (1977-1981), when figures are available for all 5 years. In all other cases, average of years within the 1977-1981 period for which figures are available.

3/ Calculated by dividing the average amount over the period 1977-1981 of a particular country by the total of the column with the heading "5-year average" in tables B.I.3.1.a to B.I.3.10.a and tables B.I.4.1.a to B.I.4.10.a, respectively.

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B.I.5. PRICES

Table B.I.5.1. Average annual prices of copper, nickel, cobalt and manganese, 1973-1983

Year	Copper		Nickel	Cobalt	Manganese
	US, Cents/lb. 1/	UK, Pounds/ metric Ton 2/	US, Cents/lb. 3/	US, $/lb. 4/	US, $/metric ton 5/
1973	78.7	718.8	153.0	3.00	0.76
1974	90.5	877.6	173.5	3.46	1.16
1975	53.2	556.5	207.3	3.98	1.39
1976	60.99	780.5	225.6	4.44	1.44
1977	56.8	750.5	227.9	5.58	1.47
1978	59.4	711.0	209.1	11.53	1.39
1979	86.9	935.1	271.5	24.58	1.35
1980	95.3	940.8	341.5	25.00	1.63
1981	74.8	864.3	342.9	19.73	1.71
1982	63.0	846.5	320.0	12.89	1.64
1983	68.0	1 049.1	320.0	n.a.	1.37

Sources: Copper, Nickel, Manganese - United Nations, Monthly Bulletin of Statistics: data for 1973-1976, May 1980 issue, p. 170; data for 1977-1982, May 1984 issue, p. 192; Cobalt - U.S. Department of the Interior, Bureau of Mines, Mineral Commodity Profiles 1983: Cobalt, p. 10.

1/ Major producer, f.o.b. Atlantic seaboard.

2/ London Metal Exchange, wirebar prompt.

3/ Producer price, f.o.b., Port Colborne, Ontario, Canada, Cathode.

4/ Average annual producer price, based on Afrimet Indussa Inc. list (Afriment Indussa, a New York-based corporation, is the exclusive agent for selling cobalt from Zaire and Belgium), cathode (electrolytic) cobalt.

5/ Manganese ore, India, mn. 48/50% , c.i.f. Europe.

/...

B.II.1. DEVELOPING LAND-BASED PRODUCER STATES

Table No. B.II.1.1. Developing land-based producer States 1/

Country/territory 2/	Copper	Nickel	Cobalt	Manganese	Ferro-manganese
Algeria	x	-	-	-	-
Argentina	x	-	-	x	x
Bolivia	x	-	-	x	-
Botswana	x	x	x	x	-
Brazil	x	x	-	x	x
Burma	x	x	-	-	-
Chile	x	-	x	x	x
Congo	x	-	-	-	-
Cuba	x	x	x	-	-
Cyprus	x	-	-	-	-
Dominican Republic	-	x	-	-	-
Ecuador	x	-	-	-	-
Egypt	-	-	-	x	-
Gabon	-	-	-	x	-
Ghana	-	-	-	x	-
Guatemala	x	x	-	-	-
India	x	-	-	x	x
Indonesia	x	x	-	x	-
Iran (Islamic Rep. of)	x	-	-	x	-
Kenya	x	-	-	-	-
Korea, Rep. of	x	x	-	x	x
Malaysia	x	-	-	-	-
Mauritania	x	-	-	-	-
Mexico	x	x	-	x	-
Morocco	x	x	x	x	-
Mozambique	x	-	-	-	-
Namibia	x	-	-	-	-
New Caledonia	-	x	x	-	-
Nicaragua	x	-	-	-	-
Pakistan	-	-	-	x	-
Papua New Guinea	x	-	-	-	-
Peru	x	-	-	x	-
Philippines	x	x	x	x	-
Sudan	-	-	-	x	-
Thailand	-	-	-	x	-
Turkey	x	-	-	x	-
Uganda	x	-	-	-	-
Vanuatu	-	-	-	x	-
Venezuela	-	-	-	-	x
Zaire	x	-	x	x	-
Zambia	x	-	x	-	-
Zimbabwe	x	x	x	-	x

Sources: Tables B.I.1.1. to B.I.1.5.

1/ Developing countries and territories identified in accordance with the list given in Handbook of International Trade and Development Statistics, Supplement 1980 (United Nations publication, Sales No. E/F.80.II.D.10), pp. viii-x. Includes developing territories, excludes centrally planned economies of Asia and Europe.

2/ Arranged alphabetically.

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B.II.2.1. SIGNIFICANCE OF FOUR MINERALS IN THE ECONOMIES OF DEVELOPING LAND-BASED PRODUCER STATES

Gross domestic product (GDP) and total exports f.o.b. of developing land-based producer-States, 1977-1981

Gross domestic product expressed in US dollars (millions of US dollars)							Value of total exports F.O.B. (millions of US dollars)					
1977	1978	1979	1980	1981	5-year average (1977-1981) 1/	Country/terr.	1977	1978	1979	1980	1981	5-year average (1977-1981) 1/
19 640	25 372	31 359	-	-	25 457	Algeria	6 119	6 354	9 569	13 656	11 816	9 503
51 129	65 089	105 623	153 331	123 779	99 790	Argentina	5 650	6 400	7 810	8 016	6 304	6 836
3 261	3 824	4 514	5 507	-	4 277	Bolivia	634	848	856	1 033	909	856
421	609	846	1 026	-	726	Botswana	-	-	-	-	-	-
178 387	206 408	231 561	248 592	288 124	230 614	Brazil	12 054	12 527	15 244	20 131	23 172	16 626
4 151	4 657	5 355	5 914	5 892	5 194	Burma	226	299	386	465	455	366
10 292	14 360	19 800	27 462	32 865	20 956	Chile	2 190	2 478	3 894	4 671	3 952	3 437
-	879	-	-	-	879	Congo	186	119	510	-	-	272
-	-	-	-	-	-	Cuba	3 545	4 487	-	-	-	4 016
1 041	1 370	1 766	2 132	2 074	1 677	Cyprus	318	344	456	533	556	441
4 539	4 728	5 525	6 649	-	5 360	Dominican Rep.	781	676	869	962	1 188	895
6 655	7 654	9 436	11 368	13 427	9 708	Ecuador	1 436	1 494	2 013	2 481	-	1 856
20 997	25 019	17 821	-	-	21 279	Egypt	1 708	1 737	1 840	3 046	3 233	2 313
2 809	2 390	2 925	-	-	2 708	Gabon	1 343	1 069	1 477	-	-	1 296
3 402	13 852	-	-	-	8 627	Ghana	1 014	1 096	1 041	-	-	1 050
5 480	6 071	6 903	7 879	8 663	6 999	Guatemala	1 178	1 089	1 241	1 520	1 281	1 262
103 096	119 011	131 766	163 034	170 171	137 416	India	6 355	6 650	7 850	8 378	8 064	7 459
45 809	51 456	51 401	72 482	84 964	61 222	Indonesia	10 853	11 643	15 590	21 909	22 259	16 451
76 374	72 414	86 645	89 201	-	81 159	Iran (Islamic Rep. of)	24 259	22 197	19 876	14 291	10 548	18 234
4 492	5 332	6 087	7 077	6 689	5 935	Kenya	1 195	1 022	1 107	1 389	1 144	1 171
35 377	47 583	60 655	58 246	64 570	53 286	Korea, Rep. of	10 046	12 711	15 055	17 505	21 254	15 314
13 141	15 661	20 148	23 812	24 766	19 506	Malaysia	6 081	7 413	11 079	-	11 189	8 941
547	541	606	691	-	596	Mauritania	157	123	147	194	259	176
81 924	102 666	134 511	186 331	239 624	149 011	Mexico	4 286	5 899	8 818	15 301	20 033	10 867
11 050	13 235	15 912	17 785	14 780	14 552	Morocco	1 300	1 511	1 873	2 249	2 242	1 835
-	-	-	-	-	-	Mozambique	129	-	-	-	-	129
-	-	-	-	-	-	Namibia	-	-	-	-	-	-
838	846	1 047	1 182	-	978	New Caledonia	310	216	360	405	343	327
2 232	2 031	1 568	2 152	2 535	2 104	Nicaragua	639	646	567	448	-	575
17 547	19 811	23 890	28 245	33 039	24 505	Pakistan	1 174	1 475	2 056	2 588	2 880	2 035
1 642	1 996	2 289	2 567	2 501	2 199	Papua New Guinea	683	714	883	1 033	851	833
13 640	11 783	15 134	19 423	23 257	16 647	Peru	1 726	1 941	3 491	3 898	3 255	2 862
21 023	24 247	29 883	35 411	38 875	29 888	Philippines	3 151	3 425	4 601	5 788	5 722	4 537
8 284	8 654	-	-	-	8 469	Sudan	661	515	535	543	658	582
19 266	23 109	27 241	33 450	36 030	27 819	Thailand	3 482	4 075	5 208	6 505	6 918	5 254
47 937	52 499	69 373	56 886	57 645	56 868	Turkey	1 753	2 288	2 261	2 911	4 703	2 783
5 876	-	-	-	-	5 876	Uganda	567	302	309	345	-	381
-	-	-	-	-	-	Vanuatu	36	42	47	-	33	40
36 311	39 822	48 966	59 688	67 788	50 515	Venezuela	9 545	9 188	14 317	20 950	20 959	14 992
4 520	-	-	-	-	4 520	Zaire	981	951	1 324	1 639	662	1 111
2 474	2 709	3 280	3 785	3 429	3 135	Zambia	897	869	1 377	1 241	-	1 096
3 148	3 455	4 088	5 491	6 534	4 543	Zimbabwe	883	891	1 217	1 423	-	1 104

Source: United Nations, Yearbook of National Income Accounts, 1981 and 1982; United Nations, Yearbook of International Trade Statistics 1981, vol. I.

1/ Average of 5 years (1977-1981) when figures are available for all 5 years; in all other cases, average of years within the 1977-1981 period for which figures are available.

TABLE B.II.2.2. Exports of copper, nickel, cobalt and manganese by developing land-based producer States as percentages of their total exports and gross domestic product (GDP)

Country/territory	Copper ore	Copper unwrought	Copper worked	Nickel ore	Nickel unwrought and worked	Manganese ores	Ferro-manganese	Copper scrap	Cobalt	Total exports of 4 minerals	Total exports of four minerals: As % of GDP 1/	Total exports of four minerals: As % of country exports 1/
	(Thousands of US dollars)											
Algeria	205	-	-	511	-	-	64	1 940	-	2 720	0.01	0.03
Argentina	-	343	402	-	39	48	-	-	-	832	0.00	0.01
Bolivia	4 189	636	-	-	-	77	-	-	-	4 902	0.11	0.57
Botswana	-	-	-	-	-	-	-	-	-	0	0.00	-
Brazil	2 530	126	10 896	5 660	149	40 475	12 390	-	-	72 226	0.03	0.43
Burma	347	-	-	-	-	-	-	-	-	347	0.01	0.09
Chile	95 266	1 510 511	73 442	63	-	23	74	1 280	-	1 680 659	8.02	48.90
Congo	524	-	-	-	-	10 178	-	-	-	10 702	1.22	3.94
Cuba	1 388	-	362	219 279	46 086	-	-	901	-	268 016	-	6.67
Cyprus	2 896	-	-	-	-	-	-	-	-	2 896	0.17	0.66
Dominican Republic	-	-	-	97	-	-	-	-	-	97	0.00	0.01
Ecuador	1 232	-	-	-	-	-	-	-	-	1 232	0.01	0.07
Egypt	-	-	-	-	-	-	-	-	-	0	0.00	0.00
Gabon	-	-	-	-	-	108 381	-	-	-	108 381	4.00	8.36
Ghana	-	-	-	-	-	19 468	-	839	-	20 307	0.24	1.93
Guatemala	2 794	-	118	18 038	37 100	-	-	-	-	58 050	0.83	4.60
India	3 766	-	1 940	-	137	21 090	6 558	-	-	33 491	0.02	0.45
Indonesia	86 379	-	604	101 905	-	2 613	-	-	-	191 501	0.31	1.16
Iran (Islamic Rep. of)	12 281	-	110	-	-	-	-	-	-	12 391	0.02	0.07
Kenya	46	-	-	-	7	-	-	-	-	53	0.00	0.00
Korea, Rep. of	-	5 735	9 875	-	100	-	1 458	483	-	17 651	0.03	0.12
Malaysia	45 850	-	728	-	210	289	4	8 290	-	55 371	0.28	0.62
Mauritania	3 453	2 163	-	-	-	-	-	-	-	5 616	0.94	3.19
Mexico	101 650	10 622	5 976	-	39	12 099	4 900	1 835	-	137 121	0.09	1.26
Morocco	10 267	-	-	-	-	13 828	-	1 620	-	25 715	6.18	1.40
Mozambique	215	-	-	-	-	5	-	-	-	220	-	0.17
Namibia	-	-	-	-	-	-	-	-	-	0	-	-
New Caledonia	162	-	-	65 679	71 775	-	-	-	-	137 616	14.07	42.11
Nicaragua	41	-	-	-	-	-	-	-	-	41	0.00	0.01
Pakistan	-	-	-	-	-	62	-	-	-	62	0.00	0.00
Papua New Guinea	408 644	-	-	-	-	-	-	-	-	408 644	18.58	49.07
Peru	39 900	497 379	18 104	248	-	2	-	-	-	555 633	3.34	19.41
Philippines	419 472	-	-	27 675	99 568	358	-	1 397	33 780	582 250	1.95	12.83
Sudan	-	-	-	-	-	-	-	-	-	0	0.00	0.00
Thailand	-	-	-	-	-	7 674	-	-	-	7 674	0.03	0.15
Turkey	-	-	-	-	-	355	12	-	-	367	0.00	0.01
Uganda	-	5 632	-	-	-	-	-	-	-	5 632	0.10	1.48
Vanuatu	-	-	-	-	-	513	-	-	-	513	-	1.30
Venezuela	-	899	-	-	-	-	31	-	-	930	0.00	0.01
Zaire	33 186	400 516	1 123	581	32	1 601	-	381	277 900	715 320	15.83	64.36
Zambia	652	895 096	3 320	-	-	-	-	1 429	77 325	977 822	31.19	89.22
Zimbabwe	-	34 850	840	282	102 104	-	-	-	-	138 076	3.04	12.51

Sources: Tables B.I.3.1 to B.I.3.10, B.II.2.1.

1/ Five-year averages of total exports of four minerals are expressed as percentages of 5-year averages of GDP and country exports, the 5-year period being 1977-1981.

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Annex II

COPY OF NOTE VERBALE DATED 16 MAY 1984 FROM THE OFFICE OF THE SPECIAL REPRESENTATIVE OF THE SECRETARY-GENERAL FOR THE LAW OF THE SEA REQUESTING STATISTICS FROM STATES OR ENTITIES PARTICIPATING IN THE PREPARATORY COMMISSION

The Secretary-General of the United Nations presents his compliments to .... and has the honour to refer to the recently concluded second session of the Preparatory Commission for the International Sea-Bed Authority and for the International Tribunal for the Law of the Sea, held in Kingston, Jamaica, during which the Commission commenced its substantive work.

In considering the part of its mandate dealing with the task of "undertaking Studies on the Problems which would be encountered by Developing Land-based Producer States likely to be most seriously affected by the production of minerals derived from the International Sea-Bed Area", the Commission came to the conclusion that certain basic information that was essential for its work should be obtained from the most direct and accurate sources. Accordingly, the Commission decided to request the Secretary-General to invite all States and entities participating or entitled to participate in the Preparatory Commission to provide it with certain basic information and data pertinent to its work.

The information required relates to the present and potential production, consumption, imports and exports of copper, nickel, cobalt and manganese. These are the most likely metals to be produced from the polymetallic nodules when production begins in the deep sea-bed area.

The information requested is for use by the Preparatory Commission in its study of the possible impact of sea-bed production on the various aspects of the mineral market for which land-based production is currently the source of supply.

Accordingly, the Secretariat would appreciate it if the aforementioned States and entities would provide the Preparatory Commission with any available information and data on the items listed in the attached annex and any other information or suggestions which may be relevant to this aspect of the work of the Commission.

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Annex

GENERAL NOTES

1. Certain items may not be applicable to a particular country. If so, please indicate.

2. Information on certain items may not be available to Governments. If so, please indicate.

3. The time-period covered may be dependent upon the availability of information at the disposal of Governments. Especially in the case of section IV, subsections C, D and F, periods covered by national development plans or industry plans will be relevant.

4. For the sake of uniformity, units are specified in the tables. The following symbols have been used:

000	thousand
000,000	million
mt	metric ton
dom cur	domestic currency

However, Governments may submit statistics in any other unit they deem appropriate. In the latter case, please specify the unit.

5. Government practices with regard to nomenclature, measurement, valuation and statistical reporting may vary. In this connection, any explanatory note will be extremely helpful.

6. In the case of certain items, e.g. production, exports and imports, Governments transmit statistics to United Nations organizations in response to either resolutions of intergovernmental bodies or questionnaires sent by United Nations organizations. Therefore, the information required by the Preparatory Commission in this questionnaire may be partially a duplication of the information already made available elsewhere; your understanding and co-operation in this regard will be appreciated.

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COUNTRY

SECTION I. PRODUCTION

For the respective metals, amount of metal content in metal-bearing ores and concentrates mined, dressed, beneficiated and otherwise prepared to render them marketable or usable in metallurgical processing (part of ISIC code 2302).

METAL	UNIT	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Copper	000 mt											
Nickel	000 mt											
Cobalt	mt											
Manganese	000 mt											

Notes

1. With regard to the nomenclature of production, although the description in the heading of the table is based on the International Standard Industrial Classification of All Economic Activities (United Nations publication, Sales No. E.68.XVII.8), (ST/STAT/M.4/Rev.2) and Indexes to the International Standard Industrial Classification of All Economic Activities (United Nations publication, Sales No. E.71.XVII.8), (ST/STAT/M.4/Rev.2/Add.1), Governments may use any other nomenclature they deem appropriate. In the latter cases, explanatory notes on nomenclature used and specific items included will be helpful. Where the ISIC nomenclature is used, for details please refer to the above publications; the heading includes a reference to the relevant ISIC code number.

2. Separate information on shipments may be entered under the heading of production in those cases where data on shipments differ significantly from data relating to production.

3. In the case of manganese, if statistics are not available in terms of metal content, please give gross weight of ore and average manganese content.

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COUNTRY

SECTION II. CONSUMPTION

For the respective metals, amount of metal and metal-predominating alloys, unwrought or worked, usable in the end-use industries (part of ISIC code 3720).

METAL	UNIT	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Copper	000 mt											
Nickel	000 mt											
Cobalt	mt											
Manganese	000 mt											
Ferro-manganese	000 mt											

Notes

1. With regard to the nomenclature of consumption, although the description in the heading of the table is based on the *International Standard Industrial Classification of All Economic Activities* (United Nations publication, Sales No. E.68.XVII.8), (ST/STAT/M.4/Rev.2) and *Indexes to the International Standard Industrial Classification of All Economic Activities* (United Nations publication, Sales No. E.71.XVII.8), (ST/STAT/M.4/Rev.2/Add.1), Governments may use any other nomenclature they deem appropriate. In the latter cases, explanatory notes on nomenclature used and specific items included will be helpful. Where the ISIC nomenclature is used, for details please refer to the above publications; the heading includes a reference to the relevant ISIC code number.

2. Please indicate apparent consumption when consumption statistics are not available directly.

COUNTRY

SECTION III. EXPORTS AND IMPORTS

Quantity and value of exports and imports of the metals, at various stages of processing.

COMMODITY	EXPORT/IMPORT QUANTITY/VALUE	UNIT	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Copper ores and concentrates (SITC code 287.11)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Copper matte, cement copper and other intermediate products of copper metallurgy (SITC code 287.12)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Copper waste and scrap (SITC code 288.21)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Copper and copper-predominating alloys, unwrought (SITC code 682.1)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Copper and copper-predominating alloys, worked (SITC code 682.2)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											

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COUNTRY

SECTION III. EXPORTS AND IMPORTS (cont.)

COMMODITY	EXPORT/IMPORT QUANTITY/VALUE	UNIT	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Nickel ores and concentrates (SITC code 287.21)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Nickel matte, nickel sinter and other intermediate products of nickel metallurgy (SITC code 287.22)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Nickel waste and scrap (SITC code 288.22)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Nickel and nickel-predominating alloys, unwrought (SITC code 683.1)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Nickel and nickel-predominating alloys, worked (SITC code 683.2)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											

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COUNTRY

SECTION III. EXPORTS AND IMPORTS (cont.)

COMMODITY	EXPORT/IMPORT QUANTITY/VALUE	UNIT	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Cobalt ores and concentrates (Part of SITC code 287.99)	EX quantity	mt											
	EX value	000 dom cur											
	IM quantity	mt											
	IM value	000 dom cur											
Cobalt and cobalt-predominating alloys, unwrought (Part of SITC code 689.99)	EX quantity	mt											
	EX value	000 dom cur											
	IM quantity	mt											
	IM value	000 dom cur											
Cobalt and cobalt-predominating alloys, worked (Part of SITC code 699.99)	EX quantity	mt											
	EX value	000 dom cur											
	IM quantity	mt											
	IM value	000 dom cur											
Manganese ores and concentrates (SITC code 287.7)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Ferro-manganese (SITC code 671.61)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Manganese and manganese-predominating alloys, unwrought (Part of SITC code 689.99)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											
Manganese and manganese-predominating alloys, worked (Part of SITC code 699.99)	EX quantity	000 mt											
	EX value	000 dom cur											
	IM quantity	000 mt											
	IM value	000 dom cur											

/...

Notes

1. With regard to the nomenclature of exports and imports, although the commodity headings in the preceding table are based on the Commodity Indexes for the Standard International Trade Classification, Revision 2, Vols. I and II, (United Nations publication, Sales Nos. E.81.XVII.3 and 4) (ST/ESA/STAT/SER.M/38/Rev., vols. I and II), Governments may use any other nomenclature they deem appropriate. In the latter cases, explanatory notes on nomenclature used and specific items included will be helpful. Where the SITC/Rev.2 nomenclature is used, for details please refer to the above publications; the commodity headings include a reference to the relevant SITC/Rev.2 code number.

2. With regard to the valuation of exports and imports, wherever possible please use transaction values. In the case of exports, the transaction value is the value at which the commodities were sold by the exporter, including the cost of transportation and insurance to bring the commodities onto the transporting vehicle at the frontier of the exporting State (an f.o.b. valuation). In the case of imports, the transaction value is the value at which the commodities were purchased by the importer plus the cost of transportation and insurance to the frontier of the importing country (a c.i.f. valuation). Please indicate valuation methods used.

3. Governments may submit the information on value of exports and imports in domestic currencies or in United States dollars, or both. When Governments submit the information in United States dollars, it would be helpful if they could indicate the applicable exchange rates; where possible, Governments are requested to use the annual average rates published by the International Monetary Fund in International Financial Statistics.

COUNTRY

SECTION IV. PRESENT PRODUCTION CAPACITY, PLANS AND PROJECTIONS FOR FUTURE PRODUCTION

A. For the respective metals, amount of metal content in metal-bearing ores and concentrates that could be mined if existing mines operated at full capacity.

METAL	UNIT	1982	1983	1984
Copper	000 mt			
Nickel	000 mt			
Cobalt	mt			
Manganese	000 mt			

B. For the respective metals, amount of metal content in known reserves that are planned to be worked by existing mining operations.

METAL	UNIT	AMOUNT
Copper	000,000 mt	
Nickel	000,000 mt	
Cobalt	000 mt	
Manganese	000,000 mt	

C. For the respective metals, expansion of capacity of existing mining operations, under development or planned in the future, in terms of amount of metal content in metal-bearing ores and concentrates.

METAL	UNIT	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Copper	000 mt											
Nickel	000 mt											
Cobalt	mt											
Manganese	000 mt											

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COUNTRY

SECTION IV. PRESENT PRODUCTION CAPACITY, PLANS AND PROJECTIONS FOR FUTURE PRODUCTION (cont.)

D. For the respective metals, production capacity of new mines under development or planned to be developed in the future, in terms of amount of metal content in metal-bearing ores and concentrates.

METAL	UNIT	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Copper	000 mt											
Nickel	000 mt											
Cobalt	mt											
Manganese	000 mt											

E. For the respective metals, amount of metal content in total known reserves.

METAL	UNIT	AMOUNT
Copper	000,000 mt	
Nickel	000,000 mt	
Cobalt	000 mt	
Manganese	000,000 mt	

F. For the respective metals, projected future production, in terms of amount of metal content in metal-bearing ores and concentrates.

METAL	UNIT	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Copper	000 mt											
Nickel	000 mt											
Cobalt	mt											
Manganese	000 mt											

Notes

1. For the mines which produce joint products, e.g. copper-cobalt, nickel-cobalt, please give information on present production capacity, expansion of capacity, new mine development, in terms of each of the joint products.

2. Any explanatory note regarding the definition used for known reserves will be helpful.

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LOS/PCN/SCN.1//WP.2/Add.2
23 August 1984

ORIGINAL: ENGLISH

**PREPARATORY COMMISSION FOR THE INTERNATIONAL
SEA-BED AUTHORITY AND FOR THE INTERNATIONAL
TRIBUNAL FOR THE LAW OF THE SEA
Special Commission 1**

BASIC DATA AND INFORMATION OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

Background paper by the Secretariat

CONTENTS

PART C*

	Paragraphs	Page
INFORMATION ON EXISTING INTERNATIONAL OR MULTILATERAL ECONOMIC MEASURES WHICH COULD BE OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1	1-56	135

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* Parts A and B are contained in documents LOS/PCN/SCN.1/WP.2 and Add.1 respectively.

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PART C

INFORMATION ON EXISTING INTERNATIONAL OR MULTILATERAL ECONOMIC MEASURES WHICH COULD BE OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

1. At the conclusion of its second session, the Preparatory Commission, on behalf of Special Commission 1, requested the Secretariat to make available to the Special Commission information on existing international or multilateral economic measures which could be of relevance to its work. In order to obtain information from the most direct and accurate sources, the Secretariat requested the organizations under the aegis of which the measures are being implemented or developed to provide such information. This part (Part C) of the paper has been prepared on the basis of the responses and materials provided by these organizations. The Secretariat reiterates its appreciation for the co-operation of the organizations concerned.

2. The measures described herein include the following:

(i) World Bank's (WB's) Structural Adjustment Loans (SALs);
(ii) European Economic Community's (EEC's) System for Minerals (SYSMIN);
(iii) General Agreement on Tariffs and Trade's (GATT's) Multilateral Trade Negotiations (MTN);
(iv) International Commodity Agreements or Arrangements within the framework of the United Nations Conference on Trade and Development's (UNCTAD's) Integrated Programme for Commodities (IPC);
(v) UNCTAD's Common Fund for Commodities; and
(vi) International Monetary Fund's (IMF's) Compensatory Financing Facility (CFF).

World Bank's (WB's) Structural Adjustment Loans (SALs) [1]

3. Structural adjustment lending was introduced by the World Bank in 1980 as a way to help some developing countries cope with a difficult economic environment by making policy and institutional changes made necessary by the rising cost of oil and falling terms of trade for some exports. Structural Adjustment Loans (SALs) have been formulated in conjunction with the stabilization programmes supported by the International Monetary Fund.

4. The basic objectives of SALs are to: support policy changes and institutional reform so as to improve the balance of payments in the medium and long term, to maintain growth in the face of severe constraints and to help regain growth momemtum in the future; assist a country with the transitional costs of needed structural changes in industry, energy and agriculture by augmenting the supply of usable foreign exchange; and act as a catalyst for inflow of external capital to help balance of payments.

5. SALs focus on policy and institutional reform, cover macroeconomic and sector issues and articulate precise policy modifications with a monitorable set of specific action to be undertaken within a specified time period. The Bank reaches a firm understanding with the Government taking out the loan on the monitorable action programmes, which are set out in a Letter of Development Policies included in the loan documentation and explicitly referenced in the Loan Agreement. SAL's funds are disbursed against imports, the release of funds being linked to the submission of appropriate documentation by the country.

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[1] The following paragraphs on the Structural Adjustment Loans (SALs) are reproduced from the response from the United Nations Unit of the International Relations Department of the World Bank, with slight modifications.

6. SALs are usually "tranched" or divided in two time segments (usually after 6-9 months) so that progress can be reviewed at appropriate intervals.

7. Lending for structual adjustment in a given country can apply to the industial sector, including mining activities such as are of concern to Special Commission 1.

8. Through April 1984 the Bank and its affiliate, the International Development Agency (IDA) have approved 27 structural adjustment loans and credits in 16 countries, for a total in excess of $US 4 billion. The principal features of these loans have been: changes in trade régimes; mobilization of domestic and foreign resources; improved efficiency of domestic resoure use; and institutional reforms.

European Economic Community's (EEC's) System for Minerals (SYSMIN) [2]

9. Once the African, Caribbean and Pacific (ACP) agricultural exporters got the support of the Stability of Export Earnings System (STABEX), the question arose of possible European Economic Community (EEC) support for those ACP countries whose economies depend largely on mineral products. It was feared that the very existence of mining production in those countries could be threatened by particularly unfavourable circumstances, such as those that have already been seen in Zaire and Zambia. It also appeared that the STABEX was ill-suited to mineral production, the economics of which is very different from that of agricultural production: in the case of iron ore which was the only mineral covered only by the STABEX under the Lomé I Convention, it appeared that the system overly favoured the short-term financial aspects to the detriment of a longer term maintenance of a source of benefits brought by a viable mining sector. This is why the Lomé II Convention contains a new title (title III) on minerals, in which an intervention system for minerals, SYSMIN, has a central part to play.

10. The characteristics of the new system depend on the specific way mineral commodities differ from other commodities. The key element of the system is production capacity, and the maintenance of a viable capacity is the central aim of the SYSMIN. The world mineral market is affected by cyclial variations of considerable magnitude and the variations result from the structure of world supply and the great sensitivity of this sector to the changes in the industrial sector. Moreover, at this moment, the somewhat gloomy perspectives with regard to the long term demand of most of the mineral commodities renders viability analysis all the more necessary. The idea is not to maintain volumes of production at all costs, in a sector where overproduction is not rare, as this would only increase the imbalance and keep prices low. What has to be done, on the contrary, is to keep the production or export capacity (the latter, practically speaking, meaning the transport networks) as intact as possible, so that the countries concerned can take greater advantage of recovery when the balance of the market is restored.

11. Production capacity may be affected by events (accidents, internal and external political upheaval) and by temporary but profound economic depression. The SYSMIN can intervene in all these cases. But although rapid technical reports can be made in the case of accidents, the effect of economic circumstances (decreases in export earnings, for example) on the production capacity requires a thorough analysis of the whole sector. It is essential to see how far the SYSMIN can contribute to re-establishing viability where it is temporarily disrupted by circumstances outside the control of the ACP country concerned.

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[2] The following paragraphs on the System for Minerals (SYSMIN) are reproduced from the response from the Delegation of the Commission of the European Communities to the United Nations, with slight modifications.

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12. Another key element of the SYSMIN is the non-automatic approach. It is impossible, without running the risk of being inefficient, to apply an automatic system to cases which differ considerably from one mineral to another and from one year to the next. But the system does have special devices to avoid both excessive coverage and geographical over-concentration of aid. So the only products covered are those which regularly account for more than 15% of an ACP country's total exports (10% in the case of land-locked, island and least developed countries). This is the so-called threshold level to identify prospective candidates for aid. Each intervention of a yearly period may not exceed 50% of the annual allocations. There are further provisions so that the SYSMIN is reserved for serious cases when the drop in capacity has to be 10% (the so-called trigger level). Also, there are other provisions restricting the scope of application of the system, in particular the list of products covered and the procedure for including new products, where required. When the Convention took effect, the products covered were: copper and associated cobalt; phosphates; tin; manganese; bauxite and aluminium; and iron ore. With experience, all these provisions form a coherent framework for the allocation of the SYSMIN funds which total European Currency Unit (ECU) 282 million for the period of the Convention.

13. All in all, it is impossible for this regulatory framework to be automatic because of the great danger that it would be misused for the benefit of the big mining companies. It is realized that a certain number of multi-national corporations, with the technical and commercial knowhow that make them important on the world mining scene, would be quite capable of turning any system to their own advantage if the system went into operation without any thorough case-by-case examination of the sector in question. This is not the aim of the Lomé Convention. In fact neither the evaluation of the damage inflicted to the export production capacity of an ACP country nor the analysis of the programmes and projects aimed at recovery in the mining sector are automatic procedures. Even the use of funds, which are loaned out on extremely soft terms (special loans at 1% rate of interest over 40 years with a 10-year grace period), may take on many different forms. The conditions may be passed on, as they stand, by the benefiting ACP country to the concerned sector or they may be adjusted (for example, via the two-stage loan method) in the most adequate manner to the needs of the concerned sector: reinforcing own funds, differentiating the loan conditions depending on their use (productive viable investments; social programmes such as housing, health and so on). Lastly, it is possible to resort to advances if a preliminary analysis suggests that conservatory measures are called for.

14. Effective co-operation in the mining sector is co-operation that is in the mutal interest of the ACP states involved and the Community; mining is an extremely suitable sector for application of this principle. If mineral resources are exploited carefully, they will be a source of foreign exchange and provide financial means for development and opportunities for industrialization in the ACP countries. Co-operation in these countries' mining sectors can improve European supplies - where the share coming from other industralized or industralizing countries has expanded immensely over the past 10 years. The dual interest means that this co-operation does not need to support projects in which Europe is not involved; thus, the SYSMIN, which applies to products exported to the Community, is not called on to intervene in projects geared to supplying Japan or the USA. Conversely, the Community vigorously refutes the argument that the SYSMIN is only a means of supplying the EEC. At a time when investors, particularly those in Europe, are being prompted by the market situation (poor demand, wide range of opportunities for investment in other parts of the world) to look elsewhere than in the ACP group, the SYSMIN is seeking to help mineral producing members in ACP so that they do not disappear from the world mining scene. This may be in Europe's interests in the long term, but it is certainly in the ACP group's interest in the short, medium and long terms.

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15. The SYSMIN, which works at the level of existing production capacity, comes further down the cooperation chain than prospecting and further up than the development of ACP potential. But it is what happens to existing capacity that determines the top and bottom ends of the chain. At the top (prospecting), it is clear that the ACP countries have been under-explored or explored too long ago (which amounts to the same thing given that major changes have been made in exploration techniques and technologies like remote sensing have been introduced). The real obstacle to prospecting, however, particularly at a time when there is a world surplus, is uncertainty about the conditions of exploitation if the decision to launch new projects, even if the market will bear them, is not taken without a proper examination of the exploitation currently being carried out in the country.

16. The SYSMIN, as has already happened, is of genuine use when its intervention goes hand in hand with substantial effort on the part of the ACP country to rationalize its mining sector. Co-operation means that each partner makes an effort. The Community can provide technical assistance and risk capital and the ACP country may allocate part of its indicative programme funds (the total amount of EEC aid any one country gets) or its mining and perhaps oil income. Similarly, with new projects, the Community may give aid for infrastructure investments (transport, housing, energy etc), risk capital, and funds the European Investment Bank (EIB) or another Community institution obtains on the money market.

17. It is unfortunate that the particularly unfavourable conditions of the international market have resulted in the fact that both countries and operators are giving priority to the short term and are overlooking factors which would ensure greater continuity and stability of their relations. This is why very few long-term sales contracts have been signed and why the possibility the Lomé II Convention (Annex VIII) offers of concluding specific investment agreements in the mining and energy sectors has not been used. This latter instrument, the best answer, as things stand, to the all too often dramatized question of non-economic risk, could no doubt be used when the world economy emerges from the present slump in the mining industry.

18. More fundamentally, it must be underlined that any mining sector must be in the position to be financed normally at the market conditions. The public development aid cannot be substituted for the capital market and for the private investment of the operators. On the other hand, by favouring the creation of suitable conditions (and notably an investment climate characterized by the stability and the continuity of the relations between host countries and operators), it can catalyse the proper placing of the ACP country concerned in the world mining economy.

General Agreement on Tariffs and Trade's (GATT's) Multilateral Trade Negotiations (MTN) 3/

19. The efforts of the General Agreement on Tariffs and Trade (GATT) with regard to assistance to developing countries are reflected in the Multilateral Trade Negotiations (MTN), the Tokyo Round of which concluded in 1979.

3/ The following paragraphs on the Multilateral Trade Negotiations (MTN) have been prepared on the basis of the response from the External Relations Division of the General Agreement on Tariffs and Trade and have been abstracted from the documents provided by the Division. These documents are General Agreement on Tariffs and Trade, The Tokyo Round of Multilateral Trade Negotiations. Report by the Director-General of GATT, Geneva, 1979 (Sales No. GATT/1979-3); The Tokyo Round of Multilateral Trade Negotiations, Volume II: Supplementary Report by the Director-General of GATT, Geneva, 1980 (Sales No. GATT/1980-1); Basic Instruments and Selected Documents, Twenty-sixth Supplement, Geneva, 1980 (Sales No. GATT/1980-3).

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20. A major objective of the developing countries in the Tokyo Round was to seek improved and predictable conditions of access for an increasingly diversified range of export products, an improved framework for the conduct of international trade taking into account their development, financial and trade needs, and special and differential treatment where this was feasible and appropriate, including special treatment for the least developed countries. They were also concerned to ensure that any liberlization achieved would be placed in a secure footing.

21. In the context of the uncertain financial and economic conditions in which the Tokyo Round took place, the results achieved represent a significant improvement of trading conditions for developing countries, including the tariff treatment of their exports. The multilateral Agreements that have been negotiated will produce greater transparency in trade, reduce the scope for arbitrary use of non-tariff measures in a number of areas and provide mechanisms for consultation, aimed at greater international co-operation and more effective monitoring of trade practices. The effective working of agreed rules and procedures will be of growing importance to developing countries in the protection of their trade interests as they participate increasingly in world trade.

22. A major result of the Tokyo Round is the provision of a legal basis for the Generalized System of Preferences (GSP) for preferential trade relations among developing countries and for other forms of special and differential treatment for these countries, including special treatment for the least developed among them. Overall, the result achieved in this area is a positive step in terms of international trade relations and a response to a number of pre-occupations of developing countries.

23. However, progress in certain areas of the Tokyo Round falls below the expectations of developing countries. For example, the need has been stressed for further efforts in the field of item-related non-tarrif measures, such as quantitative restrictions. Some specific concerns of developing countries in such areas as customs valuation and anti-dumping are identified in the alternative texts of certain provisions put forward by these countries.

24. Three areas covered by the MTN are of special relevance to the work of Special Commission 1: tariffs, non-tariff measures, and international framework for the conduct of world trade.

25. Regarding tariffs, two of the major considerations governing the attitude of developing countries to the tariff negotiations in the Tokyo Round were the structure of most favoured nation (MFN) tariffs in industrialized countries, and the impact which the successive introduction by developed countries of GSP schemes had had on the duties effectively chargeable on developing countries' exports of manufactures.

26. The developing countries' basic problem in relation to the industrial tariff structure of developed countries stems from the added protection given to successive stages of manufacturing by tariff escalation. Although most raw materials and many basic manufactures are either duty free or enter at low rates of duty in the majority of developed markets, products at further stages of industrial processing have tended to be more highly protected. The nominal rate of tariff does not, moreover, reflect the effective protection given to manufacturing in protected markets; the effective protection of value added in processing is frequently much higher than nominal tariff rates would suggest. Countries seeking to move from basic manufacturing or raw material extraction into more elaborate lines of production may therefore be handicapped by the high barriers raised through effective protection of value added.

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27. As for tariffs facing exports of developing countries, data available so far are only fragmentary. Nonetheless, it appears that as a result of the Tokyo Round, the average MFN reduction on industrial products was less deep than the overall cut, about one quarter compared with one third. This reflects the fact that the products to which the tarrif cutting formula was not applied are relatively more important with regard to exports from developing countries and, to a lesser extent, that the rate of reduction affecting products eligible for the GSP was somewhat lower than the average overall cut.

28. With regard to non-tariff measures the negotiations took two forms. First, there were negotiations for the elaboration of multilateral agreements whose basic aim was to bring more clarity and precision to the relevant GATT provisions and a greater certainty in their application. Secondly, there were negotiations carried out mainly on the basis of requests made for the removal of specific non-tariff measures affecting particular products.

29. In general, the Tokyo Round resulted in the reaffirmation and strengthening of the GATT rules, coupled with effective international consultation, surveillance and dispute settlement procedures which is of importance for all countries, including the developing countries. In the area of non-tariff measures, agreements on the following are covered: subsidies and countervailing duties; technical barriers to trade; customs valuation; government procurement; and import licensing.

30. The Agreement on Subsidies and Countervailing Duties recognizes that cubsidies are an integral part of the economic development programmes of developing countries and that governmental intervention in the economy through financial support measures should not, per se, be considered a subsidization in the case of these countries. Developing countries are not subject to the commitment made by the developed countries not to use export subsidies on industrial products, although they agree not to use such subsidies in ways which cause serious prejudice (which must be demonstrated by positive evidence) to the trade or production of another signatory. The Agreement however, inter alia, provides that developing countries should endeavour to enter into commitments to reduce or eliminate export subsidies when their use is inconsistent with their competitive and development needs.

31. The Agreement on Import Licensing Procedures contains provisions specifically relating to developing countries. Although there are inbuilt limitations, because of the nature of the subject, some special and differential treatment is provided for in the Agreement. From the point of view of developing countries as exporters of goods to the developed and to other developing countries, the measures taken in pursuance of provisions of the Agreement for simplification of licensing procedures and for making them more transparent should lead to a reduction in obstacles which these countries may be faced with at present. In addition, participation in the Committee on Import Licensing would enable developing countries to bring up any practical difficulties resulting from licensing procedures.

32. The results for developing countries in the area of international framework for conduct of world trade of the Tokyo Round pertain to several issues. The results of the negotiations on the Enabling Clause and on safeguard action for development purposes are of special interest for the developing countries, but it can be noted that the results of negotiations on safeguard action for balance-of-payments purposes and on the question of notificaton, consultation, dispute settlement and surveillance also contain important points relating to these countries.

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33. The single most important element in the area of Enabling Clause was the establishment of differential treatment for developing countries as an integral part of the GATT system. The Enabling Clause provides for such treatment in respect of:

- tariff preferences accorded under the GSP;
- non-tariff measures governed by codes negotiated under GATT auspices;
- tariff and, subject to conditions that may be prescribed, non-tariff preferences granted to one another by developing countries in the framework of regional or global trade arrangements; and
- special treatment for least developed countries.

The Clause also, inter alia:

- provides that the extension of differential treatment for developing countries must not prevent the reduction of trade barriers on an MFN basis, nor raise barriers to the trade of countries to which such treatment is not applied;
- provides that differential treatment accorded by developed countries must be designed to respond positively to the needs of developing countries;
- establishes consultation procedures to deal with difficulties that may arise in connexion with the introduction, modification or withdrawal of differential treatment;
- reaffirms and strengthens the developed countries' commitment not to seek in trade negotiations concessions inconsistent with the needs of the developing countries concerned; and
- states the expectation of developing countries that they will be able to participate more fully in the framework of rights and obligations under the GATT with the progressive development of their economies and improvement in their trade situation. In this connexion, the serious difficulties of the least developed countries making concessions and contributions are recognized.

34. With regard to safeguard action for developing countries, the purposes for which the relevant GATT provisions can be invoked have been extended so that:

- measures hitherto permitted only for the purpose of establishing a particular industry could now be used by developing countries to modify or extend existing production structures to meet the priorities of their economic development.

Developing countries are also given the possibility, in certain circumstances, of avoiding procedural delays in implementing such measures, by being allowed to take action after notification but prior to consultations or negotiations.

35. In addition, the following points should be brought to the attention of Special Commission 1. The GATT secretariat has been providing technical assistance to developing countries designed to help them assess the tariff results of the MTN, as well as information and explanations relating to the

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Codes and multilateral Agreements resulting from the Tokyo Round. Secondly, there are no specific conditions under which developing countries may obtain technical assistance from the GATT secretariat as a result of the MTN: this is available to all countries, whether or not they are members of the GATT. Furthermore, the Codes on Technical Barriers to Trade, Government Procurement and Customs Valuation contain provisions on assistance that may be provided on mutually agreed terms by developed to developing countries.

International Commodity Agreements or Arrangements within the framework of the United Nations Conference on Trade and Development's (UNCTAD's) Integrated Programme for Commodities (IPC)

36. The United Nations Conference on Trade and Development's (UNCTAD's) approach towards the stabilization and promotion of commodity markets for the benefit of producers as well as consumers has resulted in an over-all integrated framework combining several elements and covering a number of commodities. This framework is reflected in the UNCTAD'S Integrated Programme for Commodities (IPC), two of the most significant elements of which are the promotion of commodity agreements or arrangements and the establishment of a common fund for commodities. At present 18 commodities are covered by the IPC; out of the mineral commodities in which the Special Commission is interested at the moment, copper and manganese ore are covered by the IPC.

37. International commodity agreement or arrangement is an intergovernmental agreement or arrangement to promote international co-operation in a commodity, the parties to which include producers and consumers covering the bulk of world trade in the commodity concerned. No commodity agreements have been established so far for copper, nickel, cobalt or manganese, the four metals on which the Special Commission is focusing its attention. However, under the auspices of the UNCTAD, a commodity agreement in tin (Sixth International Tin Agreement [4/]) has been established; the Special Commission may wish to study this agreement in an effort to assess the relevance of the experience of this agreement for its work.

38. The Sixth International Tin Agreement is designed primarily to prevent excess fluctuations in the price of tin, to help increase the export earnings from tin, and to secure an adequate supply of tin at prices fair to consumers and remunerative to producers. The Agreement embodies two main operational mechanisms: the use of a buffer stock and the application of export controls, when necessary, to reinforce buffer stock operations under specified circumstances, in order to adjust supply to demand.

39. The operation of the buffer stock is related to a floor price and a ceiling price, the latter being required to be 30 per cent above the former. The range between them is divided into three equal sectors. The floor and ceiling prices, which are expressed in Malaysian currency (ringgit) or in any other currency which the International Tin Council (the organization responsible for the implementation of the Agreement) may decide, are subject to review by the Council from time to time and may be revised with a view to attaining the objectives of the Agreement. The initial floor and ceiling prices under the Sixth Agreement are to be those in force on the termination of the Fifth Agreement (1 July 1982).

40. The Agreement provides for a buffer stock consisting of a normal stock of 30,000 metric tons of tin metal to be financed from direct government countributions, and an additional stock of 20,000 metric tons of tin metal to be financed from borrowing, using as security stock warrants and, if necessary, government guarantees/government undertakings.

4/ The following paragraphs on the Sixth International Tin Agreement have been prepared on the basis of the response from the Commodities Division of the United Nations Conference on Trade and Development and have been abstracted from the document, United Nations, Sixth International Tin Agreement, United Nations, New York, 1982 (United Nations publication Sales No. E.82.II.D.16).

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41. A major new feature of the Sixth Agreement is the provision that the financing of the normal buffer stock shall at all times be shared equally between producing and consuming members, in proportion to their respective percentages of production or consumption in effect at the time of the apportionment of contributions. An initial contribution amounting to the cash equivalent of 10,000 metric tons of tin metal is due on entry into force of the Agreement, and the remainder on such date or dates as may be determined by the Council. Contributions can be called up in cash only, and not in tin metal or a combination of cash and metal; all are to be evaluated on the basis of the floor price in effect at the date when they are called. The cost of the normal buffer stock of 30,000 tonnes has been estaimated at about $US 450 million, and that of the full buffer stock at about $US 750 million.

42. Export controls may be used under certain conditions as an additional measure to attain the objectives of the Agreement, their introduction being conditional on the amount of tin held in the buffer stock. The Council may, by a specified majority, declare an export control period when 70 per cent or more of the maximum volume of the buffer stock (normal plus additional stock) is held in tin metal. When the tin held in stock reaches 80 per cent or more of the maximum volume of the buffer stock, the Council may declare an export control period by another specified majority. In declaring an export control period (normally corresponding to a calendar quarter), the Council fixes a total permissible export tonnage for that period, which is then divided among producing members in proportion to their respective production or export figures for a specified period. In fixing the total permissible export tonnage, the Council has to take into account estimates of production and consumption, the quantity of tin metal and cash held in the buffer stock, the quantity, availability and probable trends of other stocks and any other relevant factors. It is also the duty of the Council to adjust supply to demand so as to maintain the price of tin metal between the floor and ceiling prices. Export controls may be moderated during an export control period, if certain conditions exist.

43. There are also provisions dealing with action in the event of an actual or anticipated tin shortage as well as the disposal of tin from non-commercial stockpiles.

UNCTAD'S Common Fund for Commodities

44. Interrelated with the UNCTAD'S efforts within the framework of IPC in facilitating the conclusion and functioning of international commodity agreements, particularly concerning commodities of special interest to developing countries, the establishment of the Common Fund for Commodities 5/ has been a major focus of the UNCTAD'S activities related to commodities.

45. The Fund shall exercise the following functions: (a) to contribute, through its First Account to the financing of international buffer stocks and internationally co-ordinated national stocks, all within the framework of International Commodity Agreements or Arrangements (ICAs); (b) to finance, through its Second Account, measures in the field of commodities other than stocking; (c) to promote co-ordination and consultation through its Second Account with regard to measures in the field of commodities other than stocking, and their financing, with a view to providing a commodity focus.

5/ The following paragraphs on the Common Fund for Commodities have been prepared on the basis of the response from the Commodities Division of the United Nations Conference on Trade and Development and have been abstracted from the document, United Nations, Agreement Establishing the Common Fund for Commodities, United Nations, New York, 1981 (United Nations publication Sales No.E.81.II.D.8).

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46. The facilities of the Common Fund's First Account shall be used only by International Commodity Organizations (ICO's - the organizations established by International Commodity Agreements or Arrangements to implement the provisions of the Agreements or Arrangements) providing for either international buffer stocks or internationally co-ordinated national stocks, and which have concluded an Association Agreement with the Common Fund. The Association Agreement shall comply with the terms of the Agreement Establishing the Common Fund and of any rules and regulations consistent therewith to be adopted by the Governing Council of the Common Fund.

47. From the resources of the Second Account, the Common Fund may make or participate in loans and grants for the financing of measures in the field of commodities other than stocking. The measures shall be commodity development measures, aimed at improving the structural conditions in markets and at enhancing the long-term competitiveness and prospects of particular commodities. Such measures shall include research and development, productivity improvements, marketing and measures designed to assist, as a rule by means of joint financing or through technical assistance, vertical diversification, whether undertaken alone, as in the case of perishable commodities and other commodities whose problems cannot be adequately solved by stocking, or in addition to and in support of stocking activities.

48. There are a number of terms and conditions for the loans and grants to be made from the Second Account for the financing of measures in the field of commodities. For example, the measures shall be jointly sponsored and followed up by producers and consumers within the framework of an International Commodity Body (ICB). Among others, an ICB shall be established on an intergovernmental basis, with membership open to all States Members of the United Nations or any of its specialized agencies or of the International Atomic Energy Agency; it shall be concerned on a continuing basis with the trade, production and consumption aspects of the commodity in question; its membership shall comprise producers and consumers which shall represent an adequate share of exports and of imports of the commodity concerned. The ICB sponsoring a project to be financed by the Fund through its Second Account shall submit to the Fund a detailed written proposal specifying the purpose, duration, location and cost of the project and the agency responsible for its execution. Before any loan or grant is made, the Managing Director of the Common Fund shall present to the Executive Board of the Common Fund a detailed appraisal of the proposal along with his recommendations and the advice of the Consultative Committee of the Common Fund. Decisions with regard to the selection and approval of proposals shall be made by the Executive Board by a specified majority in accordance with the Agreement Establishing the Common Fund and any rules and regulations for the operations of the Fund adopted pursuant thereto.

49. The capital of the Common Fund shall consist of: (a) Directly Contributed Capital to be divided into 47,000 Shares to be issued by the Fund,

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having a par value of 7,566.47145 Units of Account [6] each and a total of 355,624,158 Units of Account; and (b) Guarantee Capital provided directly to the Fund by the Associated ICO's. The Shares to be issued by the Fund shall be divided into: (a) 37,000 Paid-in Shares; and (b) 10,000 Payable Shares. Each Member which has ratified, accepted or approved the Agreement shall subscribe, according to a schedule annexed to the Agreement: (a) 100 Paid-in Shares; and (b) any additional Paid-in and Payable Shares. Each Member which has acceeded to the Agreement shall subscribe: (a) 100 Paid-in Shares; and (b) any additional Paid-in and Payable Shares to be determined by the Governing Council by a specified majority in a manner consistent with the allocation of Shares in the above schedule.

International Monetary Fund's (IMF's) Compensatory Financing Facility (CFF) [7]

50. The compensatory Financing Facility (CFF) was established by the International Monetary Fund (IMF) to provide assistance to member countries experiencing balance of payments difficulties arising from export shortfalls, provided the latter are temporary and largely attributable to circumstances beyond the member's control. In addition to the two conditions mentioned above, the member must co-operate with the IMF (in an effort to find, where required, appropriate solutions for its balance of payments difficulties), and have a balance of payments need. Ideally, the facility should enable a member to borrow when its export earnings and financial reserves are low and to repay when they are high, so that its import capacity is unaffected by fluctuations in export earnings caused by external events.

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[6] The value of one Unit of Account shall be the sum of the values of the following currency converted into any one of those currencies:

United States dollar	0.40
Deutsche mark	0.32
Japanese yen	21
French franc	0.42
Pound sterling	0.050
Italian lira	52
Netherlands guilder	0.14
Canadian dollar	0.070
Belgian franc	1.6
Saudi Arabian riyal	0.13
Swedish krona	0.11
Iranian rial	1.7
Australian dollar	0.017
Spanish peseta	0.10
Norwegian krone	0.10
Austrian schilling	0.28

Any change in the list of the currencies that determine the value of the Unit of Account, and in the amounts of these currencies, shall be made in accordance with rules and regulations adopted by the Council of the Common Fund by a specified majority in conformity with the practice of a competent international monetary organization.

[7] The following paragraphs on the Compensatory Financing Facility of the International Monetary Fund have been abstracted from the document by Louis M. Goreaux entitled Compensatory Financing Facility, International Monetary Fund, Washington, D.C., 1980 (IMF Pamphlet Series No. 34).

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51. Assistance extended by the IMF under the CFF is additional to other forms of IMF assistance, e.g., drawings from the reserve tranche or the credit tranche or drawings under other IMF facilities. A member can draw under the compensatory financing facility an amount not exceeding 100 per cent of its quota in the IMF. Compensatory drawings are financed by the Fund's own resources, which consist mostly of the subscriptions paid by each member in accordance with its Fund quota. Charges and repurchase provisions (analogous to repayment of the principal) are the same for compensatory drawings as for credit tranche drawings.

52. The amount of the shortfall is measured by the difference between the value of export earnings in the year when export shortfall occurs and the value of export earnings which would have occurred in that year, if export earnings followed a trend; the trend value is calculated according to an average on the basis of export earnings in 5 years - actual export earnings in the two years before the shortfall year, export earnings in the shortfall year, and forecasted export earnings in the two years after the shortfall year. To a large extent, the very definition of the shortfall as the dowanward deviation from a five-year average centered on the shortfall year underlines the fact that the facility is applicable only to shortfalls of a temporary character.

53. If the fall in export earnings were to last for several years, the shortfall as defined for the purpose of the facility would progressively disappear. When the shortfall lasts for a single year, its destabilizing effect on the economy of the country can be largely offset by the drawing under the facility. When the shortfall lasts for two consecutive years, its destabilizing effects may still be alleviated by making use of the facility, and a number of countries have drawn on account of shortfalls encountered during two consecutive years. When the length of the export shortfall lasts for more than two years the CFF, which has been designed to deal with shortfalls of a temporary character, would be clearly inappropriate. "In the latter case, the member should apply for financial assistance from the Fund under stand-by arrangements that extend over two-year periods or extended Fund facility arrangements that cover a three-year period, and from the World Bank under structural adjustment loans. Such assistance would require the preparation of financial programmes, but the very fact that the member's balance of payments difficulties are likely to last for a number of consecutive years indicates that there is a need for policy adjustment." 8/ Special Commission 1 may, in view of the short-term orientation of the CFF, wish to investigate carefully the relevance of the experience of the CFF for its purpose.

54. The circumstances which may lead to a member to draw under the CFF may include random natural disasters, cyclical recession of the world economy and other phenomena which are clearly of a short-term nature. However, "shortfalls in export earnings do not always result from a decline in world prices or from natural causes such as droughts or floods. They may result from a decline in the volume of exports caused by inappropriate exchange rate or price policies or by other forms of export disincentives. They may also result from a reduction in exportable supplies caused by excessive domestic demand in an overheated economy. In these instances, a solution to the member's balance of payments difficulties would normally require policy changes, and the member should formulate a financial programme that could be supported by credit tranche drawings, with the conditionality attached to such drawings." 9/

8/ Ibid, p. 42.
9/ Ibid, p. 8.

55. Drawings under the CFF are based on net shortfalls rather than gross shortfalls of a member. Gross shortfall is the sum of export shortfalls in the commodities which experience such shortfalls while net shortfalls are calculated by subtracting from gross shortfall the sum of export excesses in the commodities which experience such excesses.

56. Fluctuations in a country's total export earnings are obviously affected by the commodity composition of that country's exports. Countries with highly fluctuating export earnings are those dependent mainly on a single commodity export for which world prices fluctuate widely. Countries largely dependent on commodity exports but with a well-diversified export pattern are not subject to such wide fluctuations in export earnings. Countries which depend mainly on exports of manufactures experience the smallest fluctuations in export earnings. Since its establishment in 1963, the CFF has been intended to be of special benefit to primary exporting countries, which are subject to wide fluctuations in export earnings, and to developing countries which do not have easy access to capital markets. The facility is open to all members as the IMF cannot discriminate among its members, but no industrial country has so far requested assistance under the facility, although some are large exporters of primary commodities, and all the drawings have been by developing countries.

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LOS/PCN/SCN.1/WP.2/Add.3
31 July 1985

ORIGINAL: ENGLISH

PREPARATORY COMMISSION FOR THE
INTERNATIONAL SEA-BED AUTHORITY
AND FOR THE INTERNATIONAL TRIBUNAL
FOR THE LAW OF THE SEA
Special Commission 1
Geneva, 12 August-4 September 1985

BASIC DATA AND INFORMATION OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

Responses from States/entities to the note verbale transmitted by the Secretary-General

Addendum

I. INTRODUCTION

1. Data and information on past and present production, consumption and trade as well as future production potential of copper, nickel, cobalt and manganese from land-based sources are essential for the work of Special Commission 1. Accordingly, the Commission requested the Secretariat to provide such data and information to the extent that they were available in published sources. In addition, with the understanding that States/entities themselves would be the most direct and accurate sources of data and information, the Special Commission requested the Secretary-General to invite all States and entities participating or entitled to participate in the Preparatory Commission for the International Sea-Bed Authority and for the International Tribunal for the Law of the Sea to provide it with the pertinent data and information. The Secretary-General transmitted a note verbale to all such States and entities on 16 May 1984, to which was annexed a form to be completed by them on a voluntary basis (see LOS/PCN/SCN.1/WP.2/Add.1, annex II). The data and information requested in the form are those on primary production of copper, nickel, cobalt and manganese annually for the period 1973 to 1983; consumption for end-use purposes of these metals for the same period; quantity and value of exports and imports of these metals, at various stages of processing, for the same period; and present production capacity and plans for expansion of capacity of existing mines, plans for new mine development, projected future production and amount of known reserves of these metals.

2. By 30 June 1985, responses to the note verbale of the Secretary-General had been received from 33 States and one entity: Australia, Austria, Barbados, Botswana, Brazil, Burma, Canada, Cape Verde, China, Colombia, Cuba, Cyprus, Finland, France, Germany, Federal Republic of, Greece, Guatemala, Indonesia, Italy, Japan, Liberia, Mexico, Morocco, Netherlands, New Zealand, Philippines, Portugal, Republic of Korea, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, Uganda, and the European Economic Community (EEC). The data and information included in these responses are presented in tabular form in paragraph 4 below.

3. The Chairman of Special Commission 1, in his statement to the Preparatory Commission in plenary meeting on the progress of work in that Special Commission during the 1984 Geneva meeting, urged all recipients of the note verbale to respond as expeditiously as possible (LOS/PCN/L.9). As additional responses were received, it would be possible for the Secretariat to disseminate periodically the data and information contained in those responses in the form of documents similar to the present one. In the same statement, the Chairman mentioned that the Special Commission had agreed that the collection, processing and dissemination of data were an ongoing exercise. Furthermore, for the purpose of the Special Commission and, later, the Authority, the data needed to be checked and updated on a regular basis. At the conclusion of the third session of the Preparatory Commission, the Chairman mentioned that in responding to the requests of the Special Commission, a substantial data and information base had been built up by the Secretariat. However, it should be pointed out that such a data base had been developed on an ad hoc basis. The Special Commission might wish to give guidance to the Secretariat as to the systematic and rational development and maintenance of the data base as well as to its scope, form and contents.

II. TECHNICAL NOTES WITH REGARD TO THE TABLES

4. Certain responses included explanatory notes regarding the applicability and availability of data on certain items, as well as regarding definition, classification, nomenclature or reporting procedure. The explanatory notes of a general nature are summarized below; the specific notes have been appropriately footnoted in the tables.

Production
(Section I of the form)

Austria	Reported that there was no mining of any of the four minerals concerned in Austria.
Barbados	Reported that the section in the form dealing with production was not applicable to it.
Canada	Reported that data on production were those pertaining to shipments.
Cape Verde	Reported that it was not a producer of any of the four metals concerned.
Germany, Federal Rep. of	Reported that data on production were in terms of extractable metal content.
Liberia	Reported that it did not produce any of the four metals concerned.
Switzerland	Reported that there was no production of any of the four metals concerned in Switzerland.

Consumption
(Section II of the form)

Barbados	Reported that data on consumption were not currently available.
Brazil	Reported that data on consumption were those pertaining to apparent consumption.
Colombia	Reported that data on consumption were those pertaining to volume of imports.

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Phillipines	Reported that data on consumption of any of the four metals concerned were not available.
Sweden	Presented data on consumption according to a different nomenclature from the International Standard Industrial Classification (ISIC); however, it also presented data that corresponded to ISIC.
United Kingdom	Reported that data on consumption were those pertaining to apparent consumption.

Exports and imports
(Section III of the form)

Austria	Reported that since the Standard International Trade Classification (SITC) had been modified in 1978, some of the required data could only be provided from 1978 onwards.
Botswana	Reported trade data on exports of nickel-copper matte only in a separate table; it also reported the copper, nickel and cobalt contents of exported nickel-copper matte.
Canada	Used a different classification from SITC, but presented corresponding data according to SITC; it also mentioned that all figures for 1983 were preliminary.
Cape Verde	Reported that it was neither an exporter nor an importer of any of the mineral commodities concerned.
Colombia	Used a different classification from SITC for the years 1973-1974.
Finland	Did not present any data on value of exports or imports.
Germany, Federal Rep. of	Did not present any data on value of exports or imports; it also reported that trade with the German Democratic Republic was of significance for copper and, accordingly, presented data on copper trade with the German Democratic Republic in a separate table.
Japan	Used a different classification from SITC, but presented corresponding data according to SITC.
Liberia	Reported that it did not export any of the mineral commodities concerned.
EEC	Presented data on trade only and reported that other data would be submitted by the member States of the Community; it used a different classification from SITC but presented data according to SITC; it also reported that, from 1981, data pertained to the Community of ten.

Present production capacity, plans and projections for future production
(Section IV of the form)

Barbados	Reported that this section of the form was not applicable to it.
Liberia	Reported that none of the four minerals concerned were mined currently and data required under this section were not available.

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5. The figures in the tables have been reproduced from the responses of the States and entites exactly as they were reported therein, except for minor editorial changes made for the sake of uniformity and convenience. For example, in some cases, figures have been rounded to one decimal place. It should be noted that because of rounding, certain figures may be shown as 0.0 in the tables; therefore, 0.0 does not necessarily stand for nil. Wherever the responses included explanations with regard to the figures, these have been appropriately footnoted. Two States have submitted updated or revised figures by 30 June 1985: Australia and Indonesia. The updated or revised figures are presented in the tables. In the cases of some responses, consultations between the respondent and the Secretariat led to clarification of certain figures, essentially with regard to units used. The tables reflect these clarifications. The attention of the Special Commission should be drawn to the fact that units of value of exports and imports vary from one respondent to another.

6. The Secretariat regrets that due to technical difficulties, data for section IV, subsection C of the form related to expansion of capacity of mining operations in existence, under development or planned in the future could not be presented in this document. For similiar reasons, the data contained in the responses of two States, the Netherlands and Uganda, as well as the data on trade contained in the response of Mexico, could not be included at this time. These data will be disseminated at a future date.

7. In spite of the best efforts of the Secretariat, because of the fact that a vast amount of statistics is involved and also that there are differences in definition, classification, nomenclature and reporting procedure of the respondents, it is unavoidable that errors may occur. The attention of the Secretariat should be drawn to any such error so that the necessary corrections can be made in the future.

8. The following symbols and abbreviations have been used in the tables:

000	thousand
000 000	million
mt	metric ton
dom cur	domestic currency
n.a.	not available
qty	quantity
val	value
e	estimate
p	preliminary or provisional
negl	negligible.

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STATISTICAL TABLES

List of tables

SECTION I. PRODUCTION

Table 1.1 Production of copper ores and concentrates, by country, 1973-1983
Amount of copper content

Table 1.2 Production of nickel ores and concentrates, by country, 1973-1983
Amount of nickel content

Table 1.3 Production of cobalt ores and concentrates, by country, 1973-1983
Amount of cobalt content

Table 1.4. Production of manganese ores and concentrates, by country, 1973-1983
Amount of manganese content

SECTION II. CONSUMPTION

Table 2.1. Consumption of copper ores and concentrates, by country, 1973-1983
Amount of copper content

Table 2.2 Consumption of nickel ores and concentrates, by country, 1973-1983
Amount of nickel content

Table 2.3 Consumption of cobalt ores and concentrates, by country, 1973-1983
Amount of cobalt content

Table 2.4 Consumption of manganese ores and concentrates, by country, 1973-1983
Amount of manganese content

Table 2.5 Consumption of ferro-manganese, by country, 1973-1983
Amount of ferro-manganese

SECTION III EXPORTS AND IMPORTS

SECTION 3.1. EXPORTS

Table 3.1.1 Exports of copper ores and concentrates, by country, 1973-1983

Table 3.1.2 Exports of copper matte, cement copper and other intermediate products of copper metallurgy, by country, 1973-1983

Table 3.1.3 Exports of copper waste and scrap, by country, 1973-1983

/...

Table 3.1.4 Exports of copper and copper-predominating allows, unwrought, by country, 1973-1983

Table 3.1.5 Exports of copper and copper-predominating alloys, worked, by country, 1973-1983

Table 3.1.6 Exports of nickel ores and concentrates, by country, 1973-1983

Table 3.1.7 Exports of nickel matte, nickel sinter and other intermediate products of nickel metallurgy, by country, 1973-1983

Table 3.1.8 Exports of nickel waste and scrap, by country, 1973-1983

Table 3.1.9 Exports of nickel and nickel-predominating alloys, unwrought, by country, 1973-1983

Table 3.1.10 Exports of nickel and nickel-predominating alloys, worked, by country, 1973-1983

Table 3.1.11 Exports of cobalt ores and concentrates, by country, 1973-1983

Table 3.1.12 Exports of cobalt and cobalt-predominating alloys, unwrought, by country, 1973-1983

Table 3.1.13 Exports of cobalt and cobalt-predominating alloys, worked, by country, 1973-1983

Table 3.1.14 Exports of manganese ores and concentrates, by country, 1973-1983

Table 3.1.15 Exports of ferro-manganese, by country, 1973-1983

Table 3.1.16 Exports of manganese and manganese-predominating alloys, unwrought, by country, 1973-1983

Table 3.1.17 Exports of manganese and manganese-predominating alloys, worked, by country, 1973-1983

SECTION 3.2 IMPORTS

Table 3.2.1 Imports of copper ores and concentrates, by country, 1973-1983

Table 3.2.2 Imports of copper matte, cement copper and other intermediate products of copper metallurgy, by country, 1973-1983

Table 3.2.3 Imports of copper waste and scrap, by country, 1973-1983

Table 3.2.4 Imports of copper and copper-predominating alloys, unwrought, by country, 1973-1983

Table 3.2.5 Imports of copper and copper-predominating alloys, worked, by country, 1973-1983

/...

Table 3.2.6	Imports of nickel ores and concentrates, by country, 1973-1983
Table 3.2.7	Import of nickel matte, nickel sinter and other intermediate products of nickel metallurgy, by country, 1973-1983
Table 3.2.8	Imports of nickel waste and scrap, by country, 1973-1983
Table 3.2.9	Imports of nickel and nickel-predominating alloys, unwrought, by country, 1973-1983
Table 3.2.10	Imports of nickel and nickel-predominating alloys, worked, by country, 1973-1983
Table 3.2.11	Imports of cobalt ores and concentrates, by country, 1973-1983
Table 3.2.12	Imports of cobalt and cobalt-predominating alloys, unwrought, by country, 1973-1983
Table 3.2.13	Imports of cobalt and cobalt-predominating alloys, worked, by country, 1973-1983
Table 3.2.14	Imports of manganese ores and concentrates, by country, 1973-1983
Table 3.2.15	Imports of ferro-manganese, by country, 1973-1983
Table 3.2.16	Imports of manganese and manganese-predominating alloys, unwrought, by country, 1973-1983
Table 3.2.17	Imports of manganese and manganese-predominating alloys, worked, by country, 1973-1983
SECTION 3.3	OTHER STATISTICS
Table 3.3	Botswana export of nickel-copper matte in tonnes, 1973-1983
SECTION IV.	PRESENT PRODUCTION CAPACITY, PLANS AND PROJECTIONS FOR FUTURE PRODUCTION
Table 4.1	Amount of metal content in metal-bearing ores and concentrates that could be mined if existing mines operated at full capacity
Table 4.2	Amount of metal content in known reserves that are planned to be worked by existing mining operations
Table 4.3	Production capacity of new mines under development or planned to be developed in the future, in terms of amount of metal content in metal-bearing ores and concentreates
Table 4.4	Amount of metal content in total known reserves
Table 4.5	Projected future production, in terms of amount of metal content in metal-bearing ores and concentrates

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SECTION I. PRODUCTION *

Table 1.1 Production of copper ores and concentrates, by country, 1973-1983
Amount of copper content
(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	220.0	251.0	219.0	218.0	221.0	222.0	234.0	244.0	231.0	245.0	261.0
Austria	2.7	2.4	2.0	1.2							
Botswana	-	2.8	6.5	12.5	11.8	14.6	14.6	15.6	17.8	18.4	20.3
Brazil	3.4	3.1	1.9	0.0	0.0	-	-	0.0	14.0	19.0	32.0
Canada b/	824.0	821.0	734.0	731.0	759.0	659.0	636.0	716.0	691.0	612.0	625.0(p)
Colombia	70.0			260.0	310.0	400.0	336.0	442.0	315.0	293.0	540.0(p)
Cuba				2.9	2.6	2.8	2.8	3.3	2.9	2.6	-
Cyprus	14.0	11.0	10.0	9.5	6.0	5.4	2.6	0.1	0.3	0.9	1.2
Finland	43.3	39.2	38.4	40.3	50.3	46.7	41.4	39.9	36.9	39.0	36.4
France c/											
Germany, FR d/			2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Guatemala e/				11.1	7.4	7.1	6.4	2.9			
Indonesia	38.5	65.4	62.7	69.1	57.1	59.0	60.2	59.0	62.5	77.9	71.4
Italy	0.9	1.1	0.8	1.1	0.7	0.5	0.5	0.6	0.8	0.1	1.6
Japan	91.0	82.0	85.0	82.0	81.0	72.0	59.0	53.0	52.0	51.0	46.0
Mexico		82.7	78.2	89.0	89.7	87.2	107.1	175.4	230.5	239.1	206.1
Morocco	4.0	5.0	5.0	6.0	4.0	4.0	4.0	7.0	8.0	22.0	24.0
New Zealand	0.0 f/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philippines	221.0	225.0	226.0	238.0	273.0	264.0	298.0	304.0	302.0	292.0	271.0
Portugal	5.4	5.2	4.7	4.1	3.6	3.0	3.7	3.9	2.9	2.4	2.8
Rep. of Korea	1.8	2.2	2.4	2.0	1.5	0.6	0.4	0.4	0.5	0.5	0.6
Spain	29.0	29.0	31.0	35.0	36.0	34.0	36.0	42.0	51.0	48.0	55.0
Sweden	44.8	40.6	40.6	44.9	44.8	47.6	45.8	42.8	50.7	55.4	63.9
United Kingdom	0.5	0.4	0.7	0.6	0.5	0.1	n.a.	0.2	0.6	0.6	0.7

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* See also paragraph 4 of the text.

a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, China, Greece, Liberia and Switzerland.

b/ Shipments.

c/ Production of approximately 0.0 mt annually during 1973-76 and approximately 0.1-0.5 thousand mt annually during 1977-1983.

d/ Extractable metal content.

e/ 28%-30% copper content.

f/ New Zealand reported 43 mt of production in 1973. The figure is shown as 0.0 due to rounding.

/...

Table 1.2 Production of nickel ores and concentrates, by country, 1973-1983

Amount of nickel content

(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	40.0	46.0	76.0	83.0	86.0	82.0	70.0	74.0	74.0	88.0	77.0
Botswana	-	2.6	6.5	12.6	12.1	16.1	16.2	15.4	18.3	17.8	18.2
Brazil	4.1	3.5	3.2	5.3	4.2	3.6	3.0	4.3	6.8	13.1	15.0
Canada b/	249.0	269.0	242.0	241.0	233.0	128.0	126.0	185.0	160.0	89.0	122.0(p)
Colombia	1.0	0.2		1.0				10.0		86.3	545.5(p)
Cuba				35.1	34.9	33.2	30.9	36.4	38.4	-	
Finland	6.1	5.5	6.2	5.9	6.3	4.1	5.4	5.5	7.0	7.3	5.9
France c/	115.9	136.8	129.2	118.9	115.8	66.1	80.5	86.6	78.1	60.1	46.2
Greece d/	13.9	14.8	14.9	16.4	9.6	14.9	14.6	13.9	10.9	4.8	
Guatemala e/					397.7	2.2	8.3	9.0			
Indonesia	18.1	18.7	21.2	25.0	27.3	30.3	38.3	23.0	49.3	41.7	51.2
Mexico		0.0	0.1	0.1	0.0	0.0	0.0	-	-	-	-
Philippines	0.4	0.3	9.5	15.0	37.0	29.0	33.0	47.0	29.0	20.0	14.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Austria, Barbados, Burma, Cape Verde, China, Cyprus, Germany, Federal Republic of, Italy, Japan, Liberia, Morocco, New Zealand, Portugal, Rep. of Korea, Spain, Sweden, Switzerland and United Kingdom.

b/ Shipments.

c/ Production in New Caledonia.

d/ Nickel content in alloys.

e/ 75% nickel content.

Table 1.3 Production of cobalt ores and concentrates, by country, 1973-1983

Amount of cobalt content

(metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	0.8	1.1	2.7	3.3	3.3	3.3	3.0	3.7	2 902.0	3 132.0	1 712.0
Botswana	-	-	92.0	198.0	165.0	261.0	294.0	226.0	254.0	254.0	223.0
Canada b/	1 517.0	1 564.0	1 354.0	1 356.0	1 485.0	1 233.0	1 640.0	2 118.0	2 080.0	1 274.0	1 584.0(p)
Colombia c/			1.0	1.0	4.0	9.0		15.0	3.8	5.6	-
Cuba				1 900.0	1 800.0	1 600.0	1 400.0	1 800.0	1 900.0	-	-
Finland	1 100.0	1 100.0	1 100.0	1 200.0	1 200.0	1 200.0	1 100.0	1 100.0	900.0	1 100.0	1 100.0
Morocco	1 320.0	1 627.0	1 821.0	934.0	1 015.0	1 133.0	961.0	804.0	752.0	760.0	-
Philippines	-	-	106.0	490.0	100.0	1 190.0	1 400.0	1 000.0	1 000.0	500.0	160.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Austria, Barbados, Brazil, Burma, Cape Verde, China, Cyprus, France, Germany, Federal Republic of, Greece, Guatemala, Indonesia, Italy, Japan, Liberia, Mexico, New Zealand, Portugal, Republic of Korea, Spain, Sweden, Switzerland and United Kingdom.

b/ Shipments.

c/ Figures based on volume of exports.

Table 1.4. Production of manganese ores and concentrates, by country, 1973-1983

Amount of manganese content

(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	742.0	742.0	758.0	1 049.0	677.0	612.0	840.0	984.0	706.0	547.0	677.0(e)
Botswana	0.3	-	-	-	-	-	-	-	-	-	-
Brazil b/	1 519.0	1 678.0	2 033.0	1 545.0	1 258.0	1 650.0	1 951.0	2 044.0	1 835.0	2 225.0	1 600.0
China c/	2 030.0	1 930.0	2 100.0	2 220.0	2 390.0	2 650.0	2 770.0	2 330.0	1 530.0	1 700.0	2 420.0
Colombia	3.7	5.9	6.7	7.8	11.9	20.0	21.5	21.4	20.3		
Greece d/		0.5	1.8	1.9	2.7	1.5	1.9	2.3	2.2	1.8	
Indonesia	6.2	7.2	5.5	3.5	2.4	2.4	4.5	2.7	1.0	7.2	3.0
Italy	7.1	3.9	0.0	1.0	2.1	2.9	3.0	2.8	2.6	2.6	2.2
Japan e/	189.0	167.0	158.0	142.0	126.0	104.0	88.0	80.0	87.0	78.0	77.0
Mexico	-	145.1	154.2	163.2	175.2	188.3	177.4	161.0	208.2	18.3	133.0
Morocco	123.0	144.0	109.0	97.0	93.0	96.0	113.0	110.0	92.0	81.0	62.0
Philippines f/	4.0	1.0	-	10.6	20.6	3.9	3.8	2.5	3.1	1.5	2.0
Portugal	3.4	2.1	1.7	1.4	2.4	2.6	2.7	3.0	2.7	2.0	2.7
Rep. of Korea	0.7	0.9	1.3	0.5	0.3	0.3					
Spain	2.0	-	-	-	-	-	-	-	-	-	-

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Austria, Barbados, Burma, Canada, Cape Verde, Cuba, Cyprus, Finland, France, Germany, Federal Republic of, Guatemala, Liberia, New Zealand, Sweden, Switzerland and United Kingdom.

b/ Production of manganese ore.

c/ Average content 28%.

d/ Manganese content in manganese ores concentrated.

e/ Amount of manganese concentrates.

f/ Production of manganese ore.

/...

SECTION II. CONSUMPTION *

Table 2.1. Consumption of copper ores and concentrates, by country, 1973-1983

Amount of copper content

(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	98.0	87.0	71.0	89.0	75.0	97.0	93.0	88.0	107.0	113.0	114.0
Austria						80.0	89.0	98.0	94.0	100.0	71.0
Brazil b/	141.0	187.0	163.0	191.0	229.0	199.0	238.0	269.0	197.0	258.0	145.0
Burma	0.3	0.2	0.3	0.3	0.5	0.5	0.4	0.3	1.9	0.4	n.a.
Canada c/	231.0	248.0	185.0	206.0	200.0	229.0	211.0	195.0	217.0	131.0(p)	170.0(p)
Colombia d/	5.1	11.5	7.2	5.9	8.2	14.1	12.6	24.2	23.3	21.9	
Cuba	5.0	5.0	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0
France e/	516.0			504.0	561.0	563.0	582.0	628.0	616.0	624.0	570.0
Germany, FR f/			751.0	902.0	865.0	938.0	1 010.0	1 034.0	989.0	959.0	988.0
Guatemala						0.7	0.3	0.4	0.3		
Indonesia	1.4	-	4.0	7.4	7.0	9.5	9.7	12.1	13.3	22.3	n.a.
Italy g/	295.0	308.0	290.0	322.0	326.0	344.0	352.0	388.0	366.0	342.0	325.0
Japan	1 202.0	881.0	827.0	1 050.0	1 127.0	1 241.0	1 330.0	1 325.0	1 354.0	1 330.0	1 369.0
Liberia	20.6	45.1	34.5	39.6	239.2	31.0	45.3	61.3	24.2		
Mexico		81.7	68.1	82.1	78.9	82.3	108.6	175.3	59.0	69.1	n.a.
Morocco	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	74.8	50.6	73.7
New Zealand					2.2					13.9	16.4
Rep. of Korea	8.0	8.0	10.0	21.0	27.0	16.0	36.0	65.0	106.0	109.0	103.0
Spain h/	125.0	133.0	119.0	128.0	126.0	129.0	133.0	128.0	107.0	120.0	n.a.
Sweden	n.a.	315.8	257.3	265.0	218.0	260.7	296.0	279.9	280.7	279.7	276.5
Switzerland	119.6	140.9	109.1	93.7	124.8	129.7	150.4	166.4	149.8	134.6	126.6
United Kingdom b/	541.0	497.0	451.0	458.0	512.0	502.0	499.0	409.0	333.0	355.0	358.0

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* See also paragraph 4 of the text

a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Botswana, Cape Verde, China, Cyprus, Finland, Greece, Philippines and Portugal.

b/ Apparent consumption.

c/ Domestic shipments.

d/ Figures based on volume of imports.

e/ Copper content of copper commodities of all forms and origins.

f/ Amount of copper consumed in first processing stage.

g/ Consumption of refined metal.

h/ Consumption of electrolytic copper.

/...

Table 2.2 Consumption of nickel ores and concentrates, by country, 1973-1983
Amount of nickel content
(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/	5.0	4.8	2.0	3.6	3.9	4.2	4.0	4.3	3.5	2.8	2.5
Austria						4.0	8.0	6.0	5.0	4.0	5.0
Brazil c/	5.0	7.0	5.0	5.0	6.0	6.0	8.0	12.0	9.0	7.0	7.0
Canada	11.0	12.0	11.0	10.0	9.0	12.0	8.0	10.0	9.0	7.0(p)	5.0(e)
Colombia d/	0.2	0.2	2.8	0.2	0.2	0.3	0.3	0.4	0.4	0.3	
Cuba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
France e/	15.0	15.2	24.1	19.5	20.9	22.2	19.3	27.6	28.8	23.9	24.7
Germany, FR f/			43.0	56.0	54.0	66.0	77.0	68.0	62.0	58.0	63.0
Greece	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Guatemala						0.0	0.1	0.0	0.1		
Indonesia	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	n.a.
Italy g/	23.2	20.0	17.0	22.0	23.0	24.5	26.7	27.0	20.0	24.0	22.5
Japan	32.0	28.0	22.0	28.0	27.0	28.0	32.0	37.0	34.0	33.0	40.0
Liberia	0.3	1.9	7.7	1.0	1.3	40.1	0.3	0.9	1.6		
Mexico		0.8	1.2	1.0	1.0	1.0	1.4	1.0	1.3	1.2	n.a.
Morocco	7.1	16.2	7.1	15.5	5.9	14.0	4.5	14.5	25.9	20.6	27.2
New Zealand					0.4					0.2	0.2
Rep. of Korea	1.4	2.1	1.0	2.5	1.8	3.6	2.7	3.4	4.4	3.7	3.3
Sweden	14.3	20.8	1.8	18.0	14.2	14.2	13.9	13.8	13.3	13.1	13.8
Switzerland	1.0	1.1	1.6	1.8	1.5	1.6	1.2	1.2	1.2	1.0	0.9
United Kingdom c/	36.0	34.0	52.0	42.0	51.0	32.0	33.0	40.0	31.0	22.0	23.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Botswana, Burma, Cape Verde, Cyprus, Finland, Philippines, Portugal and Spain.

b/ Estimates.

c/ Apparent consumption.

d/ Figures based on volume of imports.

e/ Nickel content of most nickel commodities, approximately 90% of total nickel consumed in end-use..

f/ Includes consumption of nickel in ferro-nickel and nickel oxyde sinter.

g/ Consumption of refined metal.

/...

Table 2.3 Consumption of cobalt ores and concentrates, by country, 1973-1983

Amount of cobalt content

(metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/	111.0	150.0	31.0	71.0	45.0	n.a.	49.0	48.0	89.0	75.0	75.0
Austria b/						10.0	11.0	11.0	11.0	12.0	-
Canada	196.0	185.0	123.0	160.0	147.0	145.0	115.0	105.0	101.0	86.0 (p)	101.0 (e)
Colombia c/			41.0	94.0	583.0	116.0	107.0	52.0	6 879.0	5 067.0	
France d/			1 200.0	800.0	570.0	980.0	950.0	1 000.0	750.0	1 500.0	n.a.
Germany, FR e/				1 635.0	1 663.0	1 472.0	1 658.0	1 640.0	720.0	960.0	1 254.0 f/
Italy	560.0	738.0	469.0	368.0	489.0	482.0	418.0	387.0	325.0	350.0	350.0 (e)
Japan	3 924.0	2 806.0	1 979.0	2 996.0	2 455.0	2 389.0	2 226.0	1 914.0	1 510.0	1 445.0	1 463.0
Mexico g/		n.a.	n.a.	n.a.	54.2	55.2	69.6	75.9	87.4	90.3	n.a.
Morocco	0.0	0.0	0.0	0.1	0.1	0.1	0.1				
New Zealand										7.3	9.8
Rep. of Korea	1.0	7.7	3.2	9.9	190.0	34.0	74.0	56.2	53.9	87.8	181.7
Switzerland										24.0	
United Kingdom d/	1 800.0	2 900.0	2 200.0	1 200.0	2 200.0	2 000.0	2 300.0	900.0	900.0	800.0	1 600.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Botswana, Burma, Cape Verde, China, Cuba, Cyprus, Finland, Greece, Guatemala, Indonesia, Liberia, Portugal and Spain. The following respondents reported that data are not available: Brazil, Phillipines and Sweden.

b/ Estimates.

c/ Figures based on volume of imports.

d/ Apparent consumption.

e/ Amount consumed as raw material.

f/ Figure for import surplus.

g/ Estimated figures, gross weight.

/...

Table 2.4 Consumption of manganese ores and concentrates, by country, 1973-1983
Amount of manganese content
(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/	c/	c/	0.8	1.3	0.8	1.2	1.0	1.8	1.7	0.6	1.1
Austria						1.0	0.0	2.0	0.0	0.0	0.0
Brazil d/	120.0	130.0	120.0	142.0	161.0	211.0	273.0	264.0	207.0	179.0	192.0
Canada	171.0	211.0	161.0	239.0	182.0	201.0	62.0	159.0	289.0	131.0 (p)	n.a.
China	2 030.0	1 930.0	2 100.0	2 220.0	2 390.0	2 650.0	2 770.0	2 330.0	1 530.0	1 700.0	2 720.0
Germany, FR e/			438.0	451.0	389.0	435.0	437.0	315.0	326.0	249.0	257.0 f/
Indonesia	-	-	2.5	3.9	4.2	5.0	5.9	7.8	8.6	7.4	n.a.
Italy	60.0 (e)	65.0 (e)	68.0	76.0	60.0	65.0	94.0	78.0	73.0	44.0	50.0 (e)
Mexico		62.6	70.7	74.8	111.6	132.9	102.7	138.0	157.2	154.1	n.a.
Morocco	0.0	0.2	0.4	0.2	0.6	0.4	0.5	0.9	0.3	0.1	0.3
New Zealand					1.4					1.3	1.1
Rep. of Korea	33.4	56.6	46.7	111.0	64.7	127.9	203.7	204.8	278.6	232.7	196.1
Sweden	3.5	3.1	2.6	1.8	1.1	1.2	1.2	1.3	0.9	1.1	1.2
Switzerland										0.0	
United Kingdom d/	318.0	271.0	191.0	311.0	217.0	188.0	297.0	109.0	156.0	121.0	236.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period:: Barbados, Botswana, Burma, Cape Verde, Colombia, Cuba, Cyprus, France, Finland, Greece, Guatemala, Japan, Liberia, Philippines, Portugal and Spain.

b/ Estimates.

c/ Less than 0.5 thousand mt.

d/ Apparent consumption. Consumption of manganese ore.

e/ Amount consumed as raw material.

f/ Figure for import surplus.

g/ Apparent consumption, includes net imports of ferro-manganese.

/...

Table 2.5 Consumption of ferro-manganese, by country, 1973-1983
Amount of ferro-manganese
(Thousands of metric tons)

Country a/	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	54.0	46.0	60.0	63.0	67.0	84.0	71.0	84.0	51.0	41.0 b/	27.0 b/
Austria						21.0	26.0	23.0	22.0	24.0	-
Brazil c/	79.0	106.0	113.0	141.0	147.0	144.0	178.0	201.0	151.0	190.0	109.0
Canada	76.0	83.0	83.0	73.0	72.0	57.0	67.0	72.0	65.0	52.0(p)	n.a.
China	270.0	220.0	280.0	240.0	280.0	320.0	420.0	340.0	260.0	280.0	300.0
Colombia d/	4.7	4.7		8.0	4.9	6.8	10.2	14.6	11.8	11.9	
France								125.0	115.0	96.0	n.a.
Germany, FR e/											
Indonesia	-	-	0.1	0.1	0.1	0.2	0.2	0.3	0.4	3.3	n.a.
Italy	170.0(e)	170.0(e)	175.0	194.0	191.0	166.0	207.0	214.0	189.0	205.0	220.0(e)
Japan	557.0	520.0	449.0	464.0	440.0	474.0	509.0	513.0	517.0	432.0	397.0
Morocco	0.2	0.2	0.2	0.0	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Rep. of Korea			0.5		1.7	3.0	2.6	0.9		5.8	
Sweden	42.2	47.2	49.1	41.3	31.7	33.4	37.1	34.6	31.3	28.6	27.7
Switzerland										0.4	
United Kingdom	209.0	182.0	161.0	216.0	165.0	134.0	195.0	92.0	112.0	88.0	150.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Botswana, Burma, Cape Verde, Cuba, Cyprus, Finland, Greece, Guatemala, Liberia, Mexico, Portugal and Spain. The following respondents reported that data are not available: New Zealand and Philippines.

b/ Apparent consumption.

c/ Consumption of manganese ferro-alloys.

d/ Figures based on volume of imports.

e/ No data available separately.

/...

SECTION III. EXPORTS AND IMPORTS *

Table 3.1.1 Exports of copper ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	229.0	178.0	155.0	160.0	109.0	110.0	150.0	175.0	116.0	160.0	248.0
	Val	000 A$	40 379.0	60 084.0	37 365.0	49 597.0	35 635.0	31 919.0	64 901.0	92 442.0	59 163.0	60 249.0	104 970.0
Austria	Qty	000 mt						0.0	0.0	0.0	0.0	-	-
	Val	000 dom cur						348.0	715.0	67.0	321.0	-	-
Brazil	Qty	000 mt	-	-	-	-	-	-	-	5.0	58.0	11.0	-
	Val	$US FOB	-	-	-	-	-	-	-	18 194.0	46 254.0	25 995.0	-
Canada b/	Qty	000 mt	346.4	344.0	314.5	303.1	279.6	282.2	314.8	286.1	276.8	257.9	313.8
	Val	000 $Can	485 373.0	589 255.0	299 745.0	308 328.0	273 719.0	279 910.0	487 020.0	523 739.0	433 484.0	330 678.0	403 603.0
Colombia	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	3.5	1.5	
	Val	000 Peso FOB	0.0	277.0	0.0	0.0	0.0	0.0	0.0	160 656.0	119 307.0	53 541.0	
Cyprus	Qty	000 mt	98.4	69.8	58.2	40.4	31.2	26.2	12.3	0.8	-	-	-
	Val	000 Cy. Pd.	4 881.0	5 147.0	2 630.0	3 230.0	1 864.0	1 462.0	995.0	105.0	-	-	-
Finland	Qty	000 mt										2.5	3.5
	Val	000 dom cur											
France	Qty	000 mt	0.7		1.6		2.3		0.5	1.6	0.8	0.6	0.4
	Val	000 FF	4.4		25.4		2.4		1.4	3.0	0.8	0.4	0.4
Germany, FR	Qty	000 mt			-	0.0	-	-	-	0.0	0.0	0.0	3.0
	Val	000 DM											
Guatemala	Qty	000 mt		4.1	12.9	10.2	9.0	6.7	10.9	4.7			
	Val	000 dom cur		1 452.3	2 483.0	2 399.6	1 756.3	1 556.8	2 465.1	587.9			
Indonesia	Qty	000 mt	35.0	63.8	60.3	67.1	60.7	60.5	53.8	61.4	65.4	79.7	70.7
	Val	000 $US	65 992.0	125 344.0	77 871.0	85 017.0	73 120.0	81 911.0	109 036.0	153 000.0	130 337.0	120 005.0	126 087.0
Italy	Qty	000 mt	1.7	0.9	0.8	0.8	0.4	0.7	0.3	1.2	0.7	0.2	0.6
	Val	000 000 Lira	1 060.0	800.0	500.0	720.0	380.0	600.0	610.0	1 970.0	910.0	270.0	930.0
Japan	Qty	000 mt	0.0	2.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val	000 yen	0.0	88 151.0	256 352.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Morocco	Qty	000 mt	14.3	17.6	8.5	22.7	18.1	10.4	21.3	22.3	22.2	60.3	69.5
	Val	000 Dinar	1 908.6	3 663.2	836.0	2 774.7	1 925.7	13 038.4	37 588.0	57 058.0	50 564.0	128 063.0	182 958.0
Philippines	Qty	000 mt	784.0	861.0	816.0	956.0	1 007.0	895.0	1 048.0	1 142.0	1 139.0	1 060.0	
	Val	000 000 $US CIF	303.7	411.6	228.9	287.3	295.7	272.3	468.3	571.6	458.6	349.8	
Portugal	Qty	000 mt	0.0	0.5	-	-	-	0.1	-	0.6	1.1	-	3.0
	Val	000 Escudos	0.4	2.1	-	-	-	0.3	-	0.5	1.2	-	59.4
Spain	Qty	000 mt	1.0	4.0	-	1.0	3.0	0.0	0.0	-	54.0	36.0	32.0
	Val	000 000 Pts.	15.0	82.0	0.0	59.0	145.0	0.0	1.0	-	1 982.0	1 419.0	804.0
Sweden c/	Qty	000 mt	37.0	34.0	21.0	32.0	36.0	16.0	27.0	9.0	22.0	45.0	34.0
	Val	000 SEK	78 877.0	54 562.0	23 875.0	43 249.0	41 274.0	17 170.0	68 377.0	19 799.0	66 978.0	96 238.0	78 671.0
United Kingdom	Qty	000 mt	1.2	0.3	0.0	0.0	2.1	1.0	-	-	0.0	0.0	0.7
	Val	000 Pounds	91.0	19.0	1.0	0.0	180.0	79.0	-	-	7.0	39.0	68.0
EEC	Qty	000 mt	5.9	43.1	45.8	2.4	22.3	25.8	15.1	19.8	8.5	7.5	5.8
	Val	000 ECU	1 669.0	17 136.0	13 125.0	3 459.0	3 873.0	4 309.0	5 123.0	5 904.0	2 262.0	1 837.0	10 491.0

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* See also paragraph 4 of the text.

a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, China, Cuba, Greece, Liberia, New Zealand, Republic of Korea, and Switzerland.

b/ Includes figures for exports of copper matte, etc.

c/ For 1973-75, figures are based on SITC 283.11.

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Table 3.1.2 Exports of copper matte, cement copper and other intermediate products of copper metallurgy, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	4.0	6.0	6.0	5.0	6.0	5.0	7.0	6.0	4.0	14.0	5.0
	Val 000 A$	1 409.0	2 761.0	1 597.0	1 724.0	2 811.0	1 867.0	5 346.0	9 709.0	3 035.0	6 878.0	4 702.0
Austria	Qty 000 mt						-	-	-	0.0	-	0.0
	Val 000 dom cur						-	-	-	3.0	-	457.0
Brazil	Qty 000 mt	-	-	0.0	-	0.0	1.5	1.6	1.0	0.8	0.7	-
	Val $US FOB	-	-	102.0	-	30.0	153.0	728.0	652.0	315.0	262.0	-
Canada b/												
China	Qty 000 mt										4.5	6.2
	Val 000 $US										170.0	210.0
Colombia	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
	Val 000 Peso FOB	2 356.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
Cyprus	Qty 000 mt	6.5	2.4	-	-	-	-	-	-	-	2.0	1.1
	Val 000 Cy. pd.	1 759.0	1 003.0	-	-	-	-	-	-	-	472.0	324.0
Finland	Qty 000 mt	1.5	9.3	9.7	9.6	18.4	10.0	10.5	5.9	20.1	11.8	11.5
	Val 000 dom cur											
France	Qty 000 mt	17.0		12.0		11.0	21.0	22.0	17.0	22.0	13.0	24.0
	Val 000 FF	106.0		628.0		59.0	130.0	172.0	163.0	286.0	115.0	297.0
Germany, FR	Qty 000 mt			40.0	39.0	34.0	30.0	23.0	26.0	24.0	30.0	20.0
	Val 000 DM											
Italy	Qty 000 mt	0.3	0.4	0.3	0.7	0.2	0.0	0.1	0.4	0.5	0.2	1.2
	Val 000 000 Lira	240.0	700.0	510.0	1 290.0	180.0	90.0	210.0	720.0	1 170.0	200.0	2 540.0
Japan	Qty 000 mt	38.0	291.3	57.2	62.7	43.5	50.9	46.9	210.8	39.3	44.6	178.7
	Val 000 000 Yen	16 822.4	166 635.4	21 269.1	27 571.6	15 372.8	14 665.1	21 820.4	117 244.7	15 990.8	17 502.9	68 600.4
Morocco	Qty 000 mt			0.0				1.2	1.7	2.2	1.8	3.3
	Val 000 Dinar			0.1				3 359.9	6 401.8	6 880.9	3 726.9	9 530.8
Philippines	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	
	Val 000 $US CIF	64.0	708.0	118.0	121.0	27.0	155.0	189.0	1 275.0	263.0	316.0	
Spain	Qty 000 mt	1.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	-	1.0
	Val 000 000 Pts	15.0	23.0	2.0	10.0	14.0	28.0	20.0	32.0	30.0	-	69.0
Sweden c/	Qty 000 mt	-	0.0	-	-	0.0	-	-	-	-	-	-
	Val 000 SEK	-	1.0	-	-	0.0	-		-	-	-	-
Switzerland	Qty 000 mt	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0
	Val 000 SF	1 954.0	725.0	833.0	561.0	483.0	312.0	412.0	359.0	365.0	224.0	311.0
U.K.	Qty 000 mt	1.4	0.4	0.1	0.1	-	-	0.0	0.0	-	0.1	0.2
	Val 000 Pounds	1 099.0	998.0	654.0	177.0	-	-	4.0	10.0	-	208.0	104.0
EEC	Qty 000 mt	0.1	0.4	0.6	1.4	0.0	0.1	1.4	3.2	2.0	0.6	2.8
	Val 000 ECU	105.0	523.0	464.0	1 288.0	15.0	46.0	706.0	1 859.0	1 251.0	368.0	1 726.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, Cuba, Greece, Guatemala, Indonesia, Liberia, New Zealand, Portugal, and Republic of Korea.

b/ Figures are included in those for exports of copper ores and concentrates.

c/ For 1973-75, figures are based on SITC 283.12.

Table 3.1.3 Exports of copper waste and scrap, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	b/	b/	1.0	b/	b/	b/	b/	1.0	b/	b/	1.0
	Val	000 A$	259.0	439.0	431.0	273.0	395.0	133.0	690.0	808.0	324.0	493.0	539.0
Austria	Qty	000 mt	0.8	0.5	0.6	0.7	1.3	2.0	3.0	4.0	5.0	5.0	-
	Val	000 dom cur						32 658.0	46 810.0	66 936.0	95 301.0	82 882.0	-
Barbados	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val	000 $BDS	191.0	169.0	138.0	198.0	106.0	65.0	156.0	159.0	157.0	22.0	160.0
Brazil	Qty	000 mt	-	-	-	-	0.0	0.0	0.0	-	-	-	-
	Val	$US FOB	-	-	-	-	1 129.0	1 455.0	2 230.0	-	-	-	-
Canada	Qty	000 mt	52.3	38.4	30.2	39.6	37.0	41.3	40.6	43.2	42.0	52.8	55.0
	Val	000 $Can	68 902.0	58 167.0	93 296.0	34 376.0	36 975.0	40 809.0	60 744.0	76 984.0	64 942.0	66 430.0	71 932.0
China	Qty	000 mt							1.4			0.1	2.6
	Val	000 $US							60.0			90.0	160.0
Colombia	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.1	
	Val	000 Peso FOB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7 757.0	1 640.0	
Cyprus	Qty	000 mt	0.8	0.4	0.2	0.1	0.1	0.2	0.4	0.3	0.6	0.4	0.5
	Val	000 Cy. Pd.	243.0	235.0	85.0	52.0	60.0	71.0	186.0	189.0	338.0	204.0	277.0
France	Qty	000 mt	56.0		56.0		96.0	98.0	105.0	108.0	190.0	112.0	126.0
	Val	000 FF	2 421.0		2 421.0		469.0	441.0	616.0	688.0	1 394.0	989.0	838.0
Germany, FR	Qty	000 mt			28.0	40.0	46.0	54.0	54.0	67.0	68.0	62.0	67.0
	Val	000 DM											
Italy	Qty	000 mt	6.5	6.7	6.7	14.4	12.7	12.9	19.7	15.8	28.1	19.9	19.0
	Val	000 000 Lira	3 430.0	6 720.0	3 530.0	13 330.0	13 150.0	11 920.0	24 460.0	20 920.0	44 460.0	33 890.0	38 830.0
Japan	Qty	000 mt	negl.	1.0	negl.	negl.	0.7	0.6	0.3	0.5	0.1	0.4	0.4
	Val	000 000 Yen	19.3	347.2	124.3	155.6	123.3	118.3	64.9	161.6	39.6	157.9	127.8
Morocco	Qty	000 mt	0.7	1.0	0.4	1.6	0.9	1.5	1.9	1.6	1.9	2.6	2.5
	Val	000 Dinar	390.4	742.2	147.1	687.9	407.1	5 814.3	10 271.0	8 984.0	4 187.0	12 457.0	18 879.0
New Zealand	Qty	000 mt	995.0	497.0	490.0	1 016.0	493.0	800.0	1 797.0	1 106.0	1 471.0	1 791.0	1 952.0
	Val	000 dom cur	232.0	221.0	185.0	259.0	203.0	203.0	568.0	616.0	733.0	754.0	1 094.0
Philippines	Qty	000 mt	1.1	1.3	0.1	0.0	0.3	0.4	3.1	0.2	0.1	0.2	
	Val	000 $US CIF	1 303.0	1 786.0	109.0	9.8	178.0	1 180.0	451.0	1 000.0	305.0	183.0	
Spain	Qty	000 mt	1.0	0.0	0.0	1.0	2.0	1.0	1.0	0.0	1.0	0.0	1.0
	Val	000 000 Pts.	81.0	17.0	8.0	71.0	112.0	58.0	73.0	18.0	27.0	16.0	66.0
Sweden c/	Qty	000 mt	0.0	0.0	1.0	1.0	1.0	0.0	1.0	2.0	1.0	2.0	2.0
	Val	000 SEK	1 763.0	1 949.0	2 029.0	1 710.0	2 457.0	1 065.0	3 243.0	8 679.0	3 688.0	6 417.0	9 351.0
Switzerland	Qty	000 mt	19.1	15.0	6.9	7.3	6.6	5.0	12.1	12.1	11.5	13.3	18.9
	Val	000 SF	80 235.0	73 649.0	19 371.0	21 467.0	18 050.0	9 369.0	29 641.0	35 226.0	32 438.0	31 955.0	49 509.0
United Kingdom	Qty	000 mt	10.8	29.7	35.3	39.1	29.5	40.4	59.6	82.4	65.6	92.7	104.7
	Val	000 Pounds	5 877.0	21 272.0	16 322.0	24 337.0	20 867.0	24 081.0	41 234.0	61 818.0	43 663.0	62 193.0	79 746.0
EEC	Qty	000 mt	16.1	19.5	17.3	25.1	22.0	26.2	29.1	26.4	32.4	33.8	31.9
	Val	000 ECU	12 138.0	24 072.0	13 857.0	22 522.0	20 295.0	21 477.0	28 855.0	31 487.0	44 218.0	69 749.0	103 671.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Burma, Cape Verde, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia, Portugal, and Republic of Korea.

b/ Nil or negligible.

c/ For 1973-75, figures are based on SITC 284.02.

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Table 3.1.4 Exports of copper and copper-predominating alloys unwrought, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	57.0	83.0	104.0	86.0	84.0	64.0	76.0	70.0	75.0	53.0	86.0
	Val	000 A$	70 600.0	113 986.0	99 516.0	99 411.0	103 962.0	77 544.0	133 413.0	140 141.0	135 900.0	85 215.0	159 042.0
Austria	Qty	000 mt						19.0	20.0	19.0	24.0	20.0	23.0
	Val	000 dom cur						378 123.0	536 786.0	559 859.0	674 936.0	518 500.0	649 216.0
Brazil	Qty	000 mt	0.0	0.0	0.0	-	0.0	1.5	1.6	1.2	0.0	0.0	0.0
	Val	$US FOB	200.0	310.0	102.0	-	32.0	153.0	834.0	1 162.0	326.0	315.0	152.0
Canada	Qty	000 mt	322.9	320.7	340.3	340.1	318.2	274.9	223.6	357.8	288.1	253.3	320.4
	Val	000 $Can	464 768.0	589 765.0	445 819.0	490 236.0	474 340.0	448 379.0	535 584.0	931 705.0	641 361.0	502 143.0	658 995.0
China	Qty	000 mt										2.9	0.0
	Val	000 $US										4 640.0	30.0
Colombia	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	
	Val	000 Peso FOB	100.0	51.0	1 495.0	1 565.0	1 825.0	3 967.0	9 551.0	6 984.0	5 760.0	13 528.0	
Cuba	Qty	000 mt			2.9	-	2.7	2.1	3.6	3.6	2.8	2.8	
	Val	000 Peso			2 563.0	-	1 949.0	2 984.0	5 252.0	5 311.0	4 259.0	5 674.0	
Cyprus	Qty	000 mt	-	-	-	-	-		0.0	-	-	-	-
	Val	000 Cy. Pd.	-	-	-	-	-	-	6.0			-	-
Finland	Qty	000 mt	20.6	17.6	17.6	34.5	37.5	33.1	33.2	29.4	30.7	34.0	48.0
	Val	000 dom cur											
France	Qty	000 mt	0.2		0.3		0.2	0.3	0.2	0.3	0.4	0.4	0.2
	Val	000 FF	2.1		3.9		2.8	3.7	3.6	5.0	5.9	6.7	4.6
Germany, FR	Qty	000 mt			56.0	62.0	98.0	113.0	98.0	86.0	70.0	63.0	83.0
	Val	000 DM											
Italy	Qty	000 mt	28.4	39.4	38.8	47.9	44.5	67.3	73.8	71.0	80.1	78.4	95.4
	Val	000 000 Lira	33 850.0	70 050.0	49 820.0	76 740.0	81 970.0	114 410.0	152 130.0	185 390.0	221 450.0	231 190.0	297 900.0
Japan	Qty	000 mt	0.0	negl.	negl.	negl.	4.6	4.5	5.5	5.6	3.8	3.8	4.1
	Val	000 000 Yen	0.0	4.7	1.2	1.8	1 252.6	1 317.9	2 456.8	3 044.0	1 782.5	1 562.6	1 680.5
Morocco	Qty	000 mt	0.2							0.0			
	Val	000 Dinar	84.7							0.4			
New Zealand	Qty	000 mt	1 853.0	613.0	161.0	92.0	132.0	213.0	71.0	b/	18.0	5.0	14.0
	Val	000 dom cur	1 588.0	670.0	167.0	182.0	308.0	612.0	92.0	b/	28.0	4.0	8.0
Spain	Qty	000 mt	9.0	7.0	17.0	35.0	47.0	52.0	36.0	66.0	74.0	73.0	77.0
	Val	000 000 Pts.	950.0	739.0	1 204.0	2 894.0	4 991.0	5 297.0	4 284.0	10 167.0	11 888.0	11 732.0	17 126.0
Sweden	Qty	000 mt	19.0	21.0	22.0	36.0	41.0	30.0	31.0	21.0	37.0	57.0	67.0
	Val	000 SEK	141 648.0	192 727.0	119 137.0	227 778.0	235 743.0	191 426.0	281 414.0	204 206.0	408 909.0	760 084.0	1 372 845.0
Switzerland	Qty	000 mt	5.9	5.2	3.9	5.5	6.1	5.3	9.8	6.6	4.7	5.7	7.0
	Val	000 SF	24 906.0	27 743.0	12 908.0	18 607.0	20 166.0	13 611.0	29 137.0	22 746.0	15 094.0	16 503.0	20 514.0
United Kingdom	Qty	000 mt	110.6	72.8	43.7	33.0	45.2	39.9	48.1	60.6	43.1	32.6	32.7
	Val	000 Pounds	63 082.0	58 176.0	25 422.0	23 113.0	34 777.0	28 810.0	43 845.0	62 113.0	38 746.0	31 012.0	34 743.0
EEC	Qty	000 mt	119.5	157.9	104.7	98.1	119.9	151.1	122.8	115.8	128.8	107.2	117.1
	Val	000 ECU	119 360.0	250 928.0	104 084.0	123 060.0	146 678.0	163 680.0	171 988.0	188 472.0	205 041.0	164 085.0	201 244.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, Greece, Guatemala, Indonesia, Liberia, Philippines, Portugal, and Republic of Korea.

b/ Nil or negligible.

Table 3.1.5 Exports of copper and copper-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	29.0	22.0	15.0	21.0	20.0	29.0	36.0	29.0	36.0	33.0	29.0
	Val	000 A$	36 435.0	37 048.0	18 446.0	28 199.0	28 939.0	39 656.0	65 173.0	62 110.0	64 080.0	61 870.0	57 692.0
Austria	Qty	000 mt	9.7	10.5	6.0	7.0	8.7	14.0	15.0	15.0	16.0	17.0	16.0
	Val	000 dom cur						562 764.0	698 512.0	765 843.0	750 243.0	798 131.0	787 097.0
Brasil	Qty	000 mt	0.0	0.0	0.0	0.0	1.0	1.3	2.3	0.0	0.0	0.0	0.0
	Val	$US FOB	1 210.0	1 430.0	1 349.0	1 504.0	3 661.0	4 200.0	9 100.0	2 528.0	1 840.0	1 023.0	1 198.0
Canada	Qty	000 mt	45.8	38.8	26.5	25.3	34.7	44.1	48.6	17.6	13.8	11.5	17.0
	Val	000 $Can	81 405.0	90 326.0	58 702.0	154 183.0	85 588.0	61 129.0	154 530.0	67 128.0	48 748.0	38 243.0	50 869.0
China	Qty	000 mt							3.2		8.1	6.6	8.3
	Val	000 $US							6 230.0		14 850.0	12 520.0	14 000.0
Colombia	Qty	000 mt	0.9	0.1	0.0	-	-	-	-	-	-	.	
	Val	000 Peso FOB	49.0	5 851.0	0.0	.	.	.	.	.	.	.	
Cyprus	Qty	000 mt	-	-	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0
	Val	000 Cy. Pd.	-	-	1.0	11.0	5.0	-	-	4.0	-	11.0	3.0
France	Qty	000 mt	82.0		78.0		205.0	115.0	158.0	212.0	249.0	240.0	247.0
	Val	000 FF	634.0		597.0		967.0	1 020.0	1 651.0	2 431.0	2 869.0	2 279.0	3 635.0
Germany, FR	Qty	000 mt			175.0	234.0	253.0	322.0	359.0	354.0	392.0	393.0	410.0
	Val	000 DM											
Guatemala	Qty	000 mt				0.0	0.0	0.0	0.0	0.2	0.1		
	Val	000 dom cur											
Italy	Qty	000 mt	10.6	12.9	14.6	13.1	13.3	21.9	20.4	21.1	18.4	16.7	16.1
	Val	000 000 Lira	18 890.0	32 830.0	30 000.0	34 300.0	42 400.0	62 470.0	69 600.0	88 160.0	96 310.0	99 320.0	96 740.0
Japan	Qty	000 mt	41.7	150.8	67.8	102.5	105.3	112.5	103.9	107.3	114.9	203.6	208.1
	Val	000 000 Yen	24 418.7	42 183.6	39 958.3	63 095.9	95 014.1	86 263.9	106 292.8	137 593.4	122 316.7	128 243.2	129 258.4
Morocco	Qty	000 mt	0.2	0.0		0.0							
	Val	000 Dinar	64.9	20.2		3.0							
New Zealand	Qty	000 mt	207.0	79.0	77.0	750.0	1 184.0	1 739.0	2 042.0	1 748.0	2 822.0	2 325.0	2 446.0
	Val	000 dom cur	245.0	131.0	134.0	887.0	1 769.0	2 862.0	3 485.0	4 649.0	7 870.0	7 708.0	7 866.0
Rep. of Korea	Qty	000 mt								5.0	5.0	6.0	25.0
	Val	000 dom cur											
Spain	Qty	000 mt	4.0	6.0	8.0	6.0	8.0	18.0	20.0	24.0	28.0	14.0	28.0
	Val	000 000 Pts.	436.0	833.0	786.0	845.0	1 179.0	2 576.0	2 354.0	5 212.0	5 299.0	3 014.0	8 320.0
Sweden	Qty	000 mt	54.0	53.0	46.0	47.0	52.0	70.0	76.0	72.0	73.0	71.0	76.0
	Val	000 SEK	451 065.0	595 306.0	362 342.0	412 063.0	485 666.0	648 197.0	888 311.0	963 473.0	958 025.0	1 032 976.0	1 368 049.0
Switzerland	Qty	000 mt	12.7	12.5	22.1	17.0	20.3	19.4	22.8	24.8	22.9	25.0	25.7
	Val	000 SF	140 159.0	183 733.0	164 023.0	151 395.0	185 124.0	175 704.0	266 965.0	244 403.0	223 688.0	226 657.0	247 991.0
United Kingdom	Qty	000 mt	129.4	110.7	122.3	121.5	133.6	131.8	118.9	119.9	97.7	102.5	94.3
	Val	000 Pounds	91 040.0	124 368.0	97 394.0	111 496.0	164 521.0	155 463.0	173 603.0	192 368.0	146 494.0	156 845.0	164 979.0
EEC	Qty	000 mt	150.4	300.2	277.9	288.0	333.6	401.0	400.1	420.5	528.5	485.9	496.0
	Val	000 ECU	219 477.0	662 729.0	430 516.0	511 189.0	645 847.0	705 056.0	821 667.0	996 086.0	1 216 452.0	1 163 796.0	1 298 095.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, Cuba, Finland, Greece, Indonesia, Liberia, Philippines, and Portugal.

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Table 3.1.6 **Exports of nickel ores and concentrates, by country, 1973-1983**

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	b/	1.0
	Val 000 A$	7 832.0	14 288.0	4 786.0	8 091.0	8 433.0	4 535.0	0.0	23.0	0.0	35.0	6 053.0
Canada c/	Qty 000 mt	91.1	85.2	84.4	72.7	80.5	39.1	42.7	42.6	53.8	27.0	40.1
	Val 000 000 $Can	278.7	288.5	355.2	316.0	372.1	162.7	215.8	292.7	401.6	187.8	233.6
France d/	Qty 000 mt	50.6	59.0	43.3	48.0	46.8	28.0	38.5	36.9	29.8	27.8	19.8
	Val 000 000 FF	197.2	313.5	265.3	357.0	352.2	143.4	211.0	299.0	279.0	281.1	166.8
Indonesia	Qty 000 mt	21.8	22.5	25.5	26.3	25.0	25.9	33.4	38.6	35.6	31.7	22.1
	Val 000 $US	10 702.0	14 337.0	20 896.0	23 448.0	20 890.0	14 330.0	22 399.0	39 440.0	29 731.0	23 286.0	11 293.0
Italy	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Japan	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
	Val 000 000 Yen	0.0	0.0	negl.	3.0	4.0	0.0	5.0	0.0	46.0	0.0	0.0
Philippines	Qty 000 mt	3.0	2.0	0.2	-	488.6	578.0	704.3	608.8	-	408.7	
	Val 000 $US CIF	1 630.0	1 513.0	158.0	-	24 428.0	26 690.0	37 776.0	94 313.0	-	41 075.0	
Spain	Qty 000 mt	-	-	-	-	-	-	0.0	0.0	-	-	-
	Val 000 000 Pts.	-	-	-	-	-	-	4.0	25.0	-	-	-
Sweden e/	Qty 000 mt	0.0	-	-	-	-	-	-	-	-	-	-
	Val 000 SEK	2.0	-		-			-	-	-	-	-
EEC	Qty 000 mt	0.0	-	0.0	0.1	0.0	-	0.0	0.0	0.0	0.0	0.0
	Val 000 ECU	1.0	-	2.0	131.0	3.0	-	3.0	13.0	3.0	5.0	33.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Austria, Barbados, Brazil, Burma, Cape Verde, China, Colombia, Cuba, Cyprus, Finland, Germany, Federal Republic of, Greece, Guatemala, Liberia, Morocco, New Zealand, Portugal, Republic of Korea, Switzerland, and United Kingdom.

b/ Nil or negligible.

c/ Includes figures for nickel matte.

d/ Exports from New Caledonia.

e/ Figures are based on the SITC 283.21 for the years 1973-74.

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Table 3.1.7 Exports of nickel matte, nickel sinter and other intermediate products of nickel metallurgy, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Val	000 A$	10 975.0	29 552.0	83 931.0	168 259.0	186 934.0	141 252.0	221 083.0	308 745.0	261 052.0	260 357.0	192 330.0
Austria	Qty	000 mt						0.0	0.0	0.0	0.0	0.0	0.0
	Val	000 dom cur						147.0	179.0	1 092.0	1 257.0	26.0	516.0
Canada b/													
Cuba c/	Qty	000 mt			16.3	-	17.3	16.0	12.5	16.5	17.7	16.0	
	Val	000 000 Peso			90.0		95.1	86.7	68.7	90.7	210.0	189.5	-
Finland	Qty	000 mt							0.8	0.8	1.1	0.8	
	Val	000 dom cur											
France d/	Qty	000 mt	6.6	11.1	7.5	8.3	9.9	8.6	6.7	7.2	4.5	1.0	0.0
	Val	000 000 FF	75.4	154.7	116.9	157.8	199.3	139.7	118.6	169.1	124.0	28.4	0.0
Germany, FR	Qty	000 mt			-	-	0.0	0.0	1.0	0.0	0.0	0.0	6.0
	Val	000 DM											
Guatemala	Qty	000 mt						2.6	8.3	9.0			
	Val	000 dom. cur.						6 479.6	29 672.3	65 299.3			
Indonesia	Qty	000 mt	-	-	-	3.4	5.0	9.5	11.9	25.0	23.7	19.7	23.1
	Val	000 $US	-	-	-	13 852.0	20 621.0	37 999.0	64 740.0	165 126.0	153 396.0	119 881.0	n.a.
Italy	Qty	000 mt	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	Val	000 000 Lira	0.0	720.0	40.0	40.0	20.0	0.0	40.0	20.0	160.0	30.0	1 860.0
New Zealand	Qty	000 mt	e/	e/	e/	e/	e/	e/	e/	e/	e/	e/	2.0
	Val	000 dom cur	e/	e/	e/	e/	e/	e/	e/	e/	e/	e/	4.0
Rep. of Korea	Qty	000 mt				1.0		0.0					
	Val	000 $US				14.2		0.3					
Spain	Qty	000 mt	-	0.0	0.0	-	0.0	-	-	-	0.0	0.0	-
	Val	000 000 Pts.	-	3.0	1.0	-	8.0	-	-	-	0.0	2.0	-
Sweden f/	Qty	000 mt	-	-		0.0	0.0	1.0	0.0	-	-	0.0	0.0
	Val	000 SEK	-	-		396.0	6 348.0	12 927.0	1 112.0	-	-	2 939.0	3 477.0
United Kingdom	Qty	000 mt	1.0	1.6	0.8	0.1	0.4	0.3	1.4	2.9	4.9	2.0	0.6
	Val	000 Pounds	995.0	1 957.0	1 089.0	151.0	1 003.0	609.0	3 377.0	8 032.0	14 264.0	5 200.0	1 801.0
EEC	Qty	000 mt	0.5	0.7	0.5	0.5	0.4	1.6	4.8	4.1	4.1	2.0	3.2
	Val	000 ECU	551.0	1 605.0	1 084.0	1 181.0	1 293.0	3 862.0	14 843.0	18 318.0	21 672.0	8 943.0	14 588.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Brazil, Burma, Cape Verde, China, Colombia, Cyprus, Greece, Japan, Liberia, Morocco, Philippines, Portugal, and Switzerland.

b/ Figures for nickel matte are included in those for nickel ores and concentrates.

c/ Value of exports includes value of cobalt exports.

d/ Exports from New Caledonia to foreign countries.

e/ Nil or negligible.

f/ Figures are based on the SITC 283.22 for the years 1973-74.

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Table 3.1.8 Exports of nickel waste and scrap, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	b/	b/	b/	b/	b/	b/	c/	c/	c/	1.0	1.0
	Val	000 A$	b/	b/	b/	b/	b/	b/	897.0	140.0	173.0	419.0	527.0
Austria	Qty	000 mt						0.0	0.0	0.0	0.0	0.0	-
	Val	000 dom cur						727.0	6 510.0	3 731.0	8 814.0	4 321.0	-
Canada	Qty	000 mt	1.5	2.7	3.2	2.5	2.2	2.3	2.4	2.4	2.8	3.3	3.0
	Val	000 $Can	2 396.0	6 416.0	7 561.0	7 579.0	7 145.0	8 023.0	7 495.0	9 324.0	10 345.0	9 976.0	12 336.0
Cyprus	Qty	000 mt	0.0	-	-	-	-	-	-	0.0	-	-	-
	Val	000 Cy. Pd.	0.7	-	-	-	-	-	-	15.0	-	-	-
France	Qty	000 mt	1.5	1.8	0.9	1.5	1.3	1.4	1.7	1.2	1.3	1.1	1.1
	Val	000 000 FF	12.3	25.8	12.7	19.1	20.2	23.0	41.1	36.2	34.5	28.1	31.3
Germany, FR	Qty	000 mt			3.0	6.0	8.0	7.0	8.0	5.0	8.0	8.0	8.0
	Val	000 DM											
Italy	Qty	000 mt	0.1	0.2	0.1	0.2	0.1	0.1	0.3	0.2	0.3	0.2	0.2
	Val	000 000 Lira	60.0	220.0	200.0	310.0	270.0	340.0	740.0	520.0	1 210.0	1 100.0	970.0
Japan	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	Val	000 000 yen	0.0	9.0	23.0	7.0	9.0	54.0	68.0	108.0	60.0	15.0	30.0
Morocco	Qty	000 mt	0.1										
	Val	000 Dinar	14.4										
New Zealand	Qty	000 mt	40.0	29.0	62.0	19.0	60.0	23.0	20.0	20.0	11.0	11.0	8.0
	Val	000 dom cur	22.0	13.0	32.0	17.0	20.0	20.0	14.0	11.0	10.0	14.0	14.0
Philippines	Qty	000 mt	0.1	-	-	-	1.0	0.1	-	0.1	0.0	0.1	-
	Val	000 $US CIF	81.0	-	-	-	0.7	274.0	-	243.0	48.0	86.0	
Rep. of Korea	Qty	000 mt							9.0	56.0	32.0	18.0	2.0
	Val	000 $US							5.2	46.6	40.6	37.1	4.4
Spain	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val	000 000 Pts.	7.0	39.0	39.0	70.0	55.0	46.0	37.0	22.0	13.0	7.0	7.0
Sweden d/	Qty	000 mt	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	2.0
	Val	000 SEK	4 274.0	3 874.0	3 192.0	4 318.0	4 216.0	2 646.0	2 864.0	4 680.0	4 300.0	3 908.0	9 549.0
Switzerland	Qty	000 mt	0.8	0.8	0.3	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.3
	Val	000 SF	2 602.0	4 254.0	1 696.0	1 661.0	1 608.0	854.0	1 855.0	1 553.0	1 537.0	1 332.0	1 640.0
United Kingdom	Qty	000 mt	2.4	4.2	4.1	5.6	6.6	3.4	4.3	4.4	4.2	5.1	5.6
	Val	000 Pounds	1 274.0	3 637.0	2 366.0	4 803.0	6 141.0	3 646.0	11 442.0	6 698.0	6 344.0	7 412.0	7 978.0
EEC	Qty	000 mt	3.8	4.9	4.5	8.1	10.7	10.6	13.1	9.6	11.5	12.8	13.2
	Val	000 ECU	3 539.0	7 083.0	4 692.0	11 096.0	17 015.0	17 239.0	25 955.0	24 621.0	26 387.0	27 356.0	28 709.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Brazil, Burma, Cape Verde, China, Colombia, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia, and Portugal.

b/ Not recorded separately.

c/ Nil or negligible.

d/ Figures are based on the SITC 283.22 for the years 1973-74.

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Table 3.1.9 Exports of nickel and nickel-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Val 000 000 A$	27.1	36.2	51.5	45.4	32.3	59.5	103.0	118.2	127.3	131.6	132.5
Austria	Qty 000 mt						0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 dom cur						252.0	16 417.0	7 832.0	9 890.0	757.0	565.0
Brazil	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val $US FOB	12.0	2 604.0	4 001.0	1 955.0	466.0	64.0	118.0	107.0	2 323.0	1 894.0	19 102.0
Canada	Qty 000 mt	120.6	119.4	90.7	87.8	14.4	105.7	84.7	88.1	79.9	62.3	66.9
	Val 000 $Can	355 733.0	405 784.0	372 245.0	389 289.0	81 304.0	482 797.0	495 040.0	659 382.0	582 710.0	424 882.0	416 391.0
China	Qty 000 mt							0.0			0.0	
	Val 000 $US							180.0			9.4	
Colombia	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Val 000 Peso FOB	0.0	5.0	0.0	312.0	1.0	0.0	0.0	1 426.0	12.0	19.0	
Cuba	Qty 000 mt			13.0		24.9	19.8	21.6	19.6	19.6	17.4	
	Val 000 000 Peso			45.7		88.9	68.1	84.2	93.6	116.4	92.8	
Finland	Qty 000 mt	5.7	5.9	5.4	6.9	7.5	6.1	9.6	11.7	11.9	9.9	11.1
	Val 000 dom cur											
France	Qty 000 mt	3.7	7.0	5.2	4.4	4.9	5.6	4.8	6.3	5.0	4.0	5.0
	Val 000 000 FF	58.0	126.2	103.1	102.4	117.9	113.1	111.8	193.7	181.1	150.8	192.0
Germany, FR	Qty 000 mt			2.0	1.0	7.0	5.0	11.0	6.0	5.0	10.0	14.0
	Val 000 DM											
Greece	Qty 000 mt	18.9	21.1	11.7	12.2	10.3	19.0	18.0	12.0	7.6	5.9	
	Val 000 000 Dracmal	516.9	1 937.2	1 666.2	1 996.2	1 661.1	2 742.4	3 307.2	3 477.7	2 798.8	2 224.1	
Italy	Qty 000 mt	0.1	0.6	0.4	0.1	0.3	0.1	0#2	0.2	0.1	0.2	0.7
	Val 000 000 Lira	260.0	1 570.0	1 050.0	280.0	1 060.0	390.0	1 170.0	1 030.0	7 980.0	1 610.0	4 810.0
Japan	Qty 000 mt	0.2	0.5	1.5	2.3	3.9	3.0	1.8	1.3	1.3	0.3	0.3
	Val 000 000 Yen	74.0	551.0	1 080.0	3 166.0	5 274.0	3 005.0	2 722.0	2 322.0	2 019.0	488.0	350.0
Philippines	Qty 000 mt	-	-	6.0	-	15.9	12.0	14.8	18.8	15.5	5.9	
	Val 000 $US CIF	-	-	30 205.0	-	72 685.0	52 382.0	80 461.0	115 461.0	89 843.0	27 063.0	
Rep. of Korea	Qty 000 mt							48.3	17.0	3.0	4.2	2.9
	Val 000 $US							231.0	114.0	6.6	8.1	5.3
Spain	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
	Val 000 000 Pts.	15.0	488.0	4.0	24.0	2.0	10.0	57.0	7.0	0.0	3.0	18.0
Sweden	Quna000 mt	3.0	3.0	3.0	2.0	3.0	2.0	2.0	2.0	1.0	1.0	0.0
	Val 000 SEK	24 620.0	24 181.0	20 288.0	21 777.0	22 483.0	12 787.0	18 066.0	28 618.0	22 046.0	17 438.0	17 554.0
Switzerland	Qty 000 mt	0.0	0.2	0.1	0.2	0.1	0.1	0.4	0.2	0.0	0.0	0.0
	Val 000 SF	394.0	3 072.0	1 537.0	2 398.0	1 035.0	674.0	3 904.0	2 142.0	253.0	379.0	446.0
United Kingdom	Qty 000 mt	36.5	40.1	31.5	29.7	26.3	20.4	14.8	11.0	20.4	11.5	13.7
	Val 000 Pounds	50 544.0	63 357.0	62 625.0	81 322.0	67 113.0	48 304.0	41 395.0	38 108.0	70 830.0	44 170.0	52 799.0
EEC	Qty 000 mt	7.2	21.4	14.3	12.3	15.4	10.2	9.9	8.4	14.0	8.1	11.3
	Val 000 ECU	15 972.0	61 312.0	45 425.0	51 247.0	55 345.0	36 122.0	40 474.0	46 020.0	84 021.0	50 961.0	71 052.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barhados, Burma, Cape Verde, Cyprus, Guatemala, Indonesia, Liberia, Morocco, New Zealand, and Portugal.

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Table 3.1.10 Exports of nickel and nickel-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Value Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Val 000 A$	15 187.0	14 432.0	26 506.0	34 300.0	24 839.0	14 142.0	3 134.0	2 001.0	1 686.0	1 295.0	265.0
Austria	Qty 000 mt	0.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0
	Val 000 dom cur						50 453.0	42 349.0	63 358.0	63 652.0	40 630.0	53 797.0
Brazil	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	2.6	3.2	1.0	0.0	0.0	0.0
	Val $US FOB	195.0	52.0	216.0	131.0	473.0	289.0	395.0	341.0	291.0	635.0	469.0
Canada	Qty 000 mt	3.8	8.9	9.8	11.2	32.8	14.9	11.9	18.9	13.4	10.4	10.4
	Val 000 $Can	12 804.0	30 962.0	41 403.0	54 303.0	57 717.0	82 014.0	80 540.0	159 170.0	111 829.0	81 271.0	80 234.0
China	Qty 000 mt							0.0				0.0
	Val 000 $US							20.0				6.8
Colombia	Qty 000 mt	0.0	0.2	0.0	-	-	0.0	0.0	-	-	-	
	Val 000 Peso FOB	128.0	2 696.0	0.0	-	-	0.0	0.0	-	-	-	
Cyprus	Qty 000 mt	-	-	0.0	0.1	0.0	-	-	-	-	-	-
	Val 000 Cy. Pd.	-	-	6.0	15.0	1.0	-	-	-	-	-	-
France	Qty 000 mt	4.0	5.0	5.2	6.3	7.0	6.5	5.7	6.3	4.5	5.2	4.9
	Val 000 000 FF	75.0	128.2	130.7	153.4	188.9	198.2	213.5	272.4	222.7	277.2	233.7
Germany, FR b/	Qty 000 mt			14.0	15.0	16.0	17.0	18.0	20.0	18.0	18.0	18.0
	Val 000 DM											
Italy	Qty 000 mt	0.5	0.7	0.8	2.1	1.3	0.4	0.4	0.5	0.5	0.5	0.7
	Val 000 000 Lira	1 410.0	2 620.0	3 170.0	2 930.0	4 900.0	3 430.0	3 240.0	3 520.0	5 760.0	7 290.0	7 510.0
Japan	Qty 000 mt	0.7	1.1	1.7	2.8	1.9	1.8	0.5	0.5	0.3	0.9	0.5
	Val 000 000 yen	1 181.0	2 492.0	2 617.0	4 223.0	3 052.0	2 602.0	1 486.0	1 953.0	1 322.0	3 767.0	1 802.0
Morocco	Qty 000 mt		0.1			0.0						
	Val 000 Dinar		8 007.0			3 741.0						
New Zealand	Qty 000 mt	c/	c/	c/	c/	c/	c/	61.0	15.0	c/	c/	c/
	Val 000 dom cur	c/	c/	c/	c/	c/	c/	326.0	104.0	c/	c/	c/
Philippines	Qty 000 mt	-	-	-	-	1.4	1.2	2.4	4.1	2.7	5.0	
	Val 000 $US CIF	-	-	-	-	6 784.0	5 150.0	12 865.0	25 039.0	15 497.0	22 871.0	
Rep. of Korea	Qty 000 mt	1.0	11.8			36.3	0.3	0.4	6.6	4.7	1.3	36.5
	Val 000 $US	3.7	26.4			99.0	8.0	7.5	26.8	18.2	10.4	69.2
Spain	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Pts.	4.0	8.0	3.0	3.0	5.0	16.0	28.0	88.0	110.0	103.0	129.0
Sweden	Qty 000 mt	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Val 000 SEK	37 874.0	54 567.0	53 295.0	47 586.0	57 640.0	64 192.0	83 106.0	34 830.0	134 223.0	98 017.0	120 227.0
Switzerland	Qty 000 mt	1.1	2.0	2.5	3.2	2.2	0.4	0.4	0.4	0.4	0.6	0.4
	Val 000 dom cur	27 740.0	46 055.0	50 773.0	50 435.0	43 603.0	23 933.0	22 976.0	24 119.0	24 861.0	50 955.0	23 813.0
United Kingdom	Qty 000 mt	14.5	14.4	10.4	10.1	10.4	10.1	13.1	9.2	9.7	7.8	7.7
	Val 000 Pounds	23 004.0	28 051.0	27 214.0	30 663.0	38 824.0	38 216.0	52 271.0	49 699.0	59 242.0	46 813.0	47 385.0
EEC	Qty 000 mt	14.2	33.0	21.1	23.0	22.4	14.5	16.2	14.1	12.1	11.0	11.6
	Val 000 ECU	39 422.0	95 599.0	84 564.0	103 192.0	115 740.0	86 657.0	103 855.0	117 786.0	128 285.0	116 294.0	121 544.0

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a/ The following respondents reported "0", 'negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia and Portugal.

b/ Includes nickel silver.

c/ Nil or negligible.

/...

Table 3.1.11 Exports of cobalt ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Austria	Qty mt						0.0	1.0	0.0	0.0	0.0	-
	Val 000 dom cur						32 080.0	29 569.0	34 284.0	17 491.0	65 568.0	-
Cuba c/	Qty mt			1 700.0	-	1 700.0	1 500.0	1 200.0	600.0	1 800.0	1 500.0	
	Val 000 dom cur											
France	Qty mt						0.0	-	0.0	-	-	-
	Val 000 FF						0.3	-	0.3	-	-	-
Germany, FR d/												
Italy	Qty mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	640.0	10.0	0.0
Morocco	Qty mt	10 549.0	14 547.0		8 550.4	9 075.6	8 922.4	7 529.6	7 489.0	6 333.5	5 017.3	1 852.2
	Val 000 Dinar	1 630.3	3 039.2		2 186.9	3 457.2	54 206.6	119 205.0	137 705.0	91 670.0	56 517.0	6 357.3
Spain e/												
EEC	Qty mt	-	-	-	-	-	-	-	-	26.0	0.0	-
	Val 000 ECU	-	-	-	-	-	-	-	-	22.0	1.0	-

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Barbados, Brazil, Burma, Canada, Cape Verde, China, Colombia, Cyprus, Finland, Germany, Federal Republic of, Greece, Guatemala, Indonesia, Liberia, New Zealand, Philippines, Portugal, Republic of Korea, Switzerland, and the United Kingdom. The following respondents reported that data were not available: Japan and Sweden.

b/ Australia reported that no information was available for cobalt separately.

c/ Value of exports of cobalt commodities are included in nickel commodities.

d/ Germany, Federal Republic of, mentioned that it had exports up to 1980, but did not present any figures for exports.

e/ Included in "other metal commodities not elsewhere specified".

/...

Table 3.1.12 Exports of cobalt and cobalt-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Brazil	Qty mt	-	0.0	-	-	-	3.0	49.0	4.0	8.0	7.0	6.0
	Val 000 $US FOB	-	0.0	-	-	-	42.0	154.0	87.0	145.0	53.0	95.0
Canada c/	Qty mt	550.8	479.4	430.5	523.5	684.2	716.0	296.1	324.9	676.6	585.0	885.3
	Val 000 $Can	3 720.0	3 787.0	4 055.0	4 879.0	9 241.0	16 406.0	21 657.0	20 291.0	27 760.0	15 899.0	16 846.0
Colombia	Qty mt	0.0	0.0	1.0	1.0	4.0	9.0	0.0	1.0	0.0	0.0	
	Val 000 Peso FOB	0.0	0.0	228.0	620.0	1 488.0	4 276.0	0.0	1 278.0	0.0	0.0	
Cuba d/												
France	Qty mt	0.3		0.2		0.9	0.6	0.6	0.6	0.6	0.5	0.6
	Val 000 FF	11.0		72.0		52.0	117.0	137.0	127.0	27.0	70.0	6.5
Germany,FR e/	Qty mt			189.0	259.0	281.0	685.0	710.0	680.0	413.0	412.0	440.0
	Val 000 DM											
Italy	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0
	Val 000 000 Lira	0.0	0.0	0.0	170.0	50.0	880.0	1 990.0	430.0	400.0	270.0	210.0
Rep. of Korea	Qty 000 mt	5.1	42.0						0.1			7.5
	Val 000 $US	35.0	282.0						7.0			19.3
Spain f/												
Sweden	Qty mt	8.0	36.0	82.0	23.0	40.0	63.0	221.0	103.0	342.0	65.0	67.0
	Val 000 SEK	425.0	1 500.0	3 003.0	994.0	1 378.0	4 571.0	39 257.0	19 310.0	72 521.0	14 597.0	11 754.0
United Kingdom	Qty mt	261.0	134.0	215.0	934.0	240.0	324.0	633.0	782.0	595.0	322.0	389.0
	Val 000 Pounds	333.0	191.0	416.0	4 435.0	1 096.0	5 269.0	14 850.0	18 382.0	10 781.0	3 734.0	3 596.0
EEC g/	Qty mt	627.0	647.0	481.0	16 282.0	5 961.0	13 916.0	973.0	709.0	3 122.0	487.0	984.0
	Val 000 ECU	2 335.0	3 752.0	2 733.0	10 201.0	9 328.0	10 522.0	29 215.0	21 299.0	24 894.0	8 374.0	12 880.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Burma, Cape Verde, China, Cyprus, Finland, Greece, Guatemala, Indonesia, Liberia, Morocco, New Zealand, Philippines, Portugal, and Switzerland. The following respondent reported that data were not available: Japan.

b/ Australia reported that no information for was available for cobalt separately.

c/ Cobalt metal.

d/ Value of exports of cobalt commodities are included in nickel commodities.

e/ Up to 1980, included cobalt matte as well as waste and scrap.

f/ Included in "other metal commodities not elsewhere specified".

g/ Figures for Belgium, except for quantity for the years 1976-1978 and 1981, not included because they are not available.

/...

Table 3.1.13 **Exports of cobalt and cobalt-predominating alloys, worked, by country, 1973-1983**

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Canada	Qty mt	512.4	655.2	560.7	471.3	605.3	748.3	445.1	1 091.0	601.0	212.0	192.0
	Val 000 $Can	1 926.0	3 241.0	2 836.0	3 126.0	4 935.0	6 995.0	8 354.0	41 579.0	27 532.0	7 633.0	6 173.0
Colombia	Qty mt	0.0	0.0	-	0.0	0.0	0.0	0.0	2 960.0	3 759.0	5 533.0	
	Val 000 000 Peso FOB	0.0	0.0	-	0.0	0.0	0.0	0.0	461.8	793.5	1 092.1	
Cuba c/												
France	Qty mt	0.1		0.2		0.1	0.2	0.2	0.2	0.2	0.2	0.2
	Val 000 FF	4.3		15.4		17.0	59.0	46.0	59.0	49.0	45.0	45.0
Germany, FR	Qty 000 mt			33.0	61.0	59.0	111.0	138.0	142.0	99.0	211.0	221.0
	Val 000 DM											
Italy	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	10.0	50.0	10.0	110.0	90.0	60.0	70.0	250.0	220.0	240.0	270.0
Spain d/												
United Kingdom	Qty mt	238.0	149.0	287.0	494.0	383.0	561.0	329.0	279.0	216.0	192.0	354.0
	Val 000 Pounds	577.0	647.0	1 651.0	3 169.0	3 196.0	7 169.0	7 973.0	6 663.0	4 066.0	2 855.0	2 444.0
EEC e/	Qty mt	57.0	225.0	409.0	547.0	412.0	574.0	354.0	330.0	275.0	267.0	551.0
	Val 000 ECU	819.0	2 415.0	3 878.0	4 855.0	4 863.0	10 413.0	13 643.0	13 701.0	10 751.0	10 484.0	10 119.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Brazil, Burma, Cape Verde, China, Cyprus, Finland, Greece, Guatemala, Indonesia, Liberia, Morocco, New Zealand, Philippines, Portugal, Republic of Korea, and Switzerland. The following respondents reported that data were not available: Japan and Sweden.

b/ Australia reported that no information was available for cobalt separately.

c/ Value of exports of cobalt commodities are included in nickel commodities.

d/ Included in "other metal commodities not elsewhere specified".

e/ Figures for Belgium, except for quantity for the years 1976-81, not included because they are not available.

/...

Table 3.1.14 Exports of manganese ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Austria	Qty 000 mt						-	-	2.0	-	-	-
	Val 000 dom cur						-	-	811.0	-	-	-
Brazil	Qty 000 mt	788.0	1 483.0	1 556.0	1 072.0	570.0	591.0	970.0	1 032.0	994.0	988.0	1 004.0
	Val 000 $US FOB	18 866.0	49 498.0	80 600.0	66 042.0	32 100.0	30 729.0	47 686.0	58 100.0	60 720.0	54 925.0	57 915.0
China c/	Qty 000 mt							82.4			41.6	50.6
	Val 000 $US							3 340.0			1 780.0	2 140.0
Colombia	Qty 000 mt	5.0	2.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
	Val 000 Peso FOB	7.0	3.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
France	Qty 000 mt	10.0		4.5		8.3	4.9	7.0	8.3	17.0	11.0	21.0
	Val 000 FF	2.7		2.4		8.9	4.7	7.0	8.2	8.8	10.0	17.0
Germany, FR	Qty 000 mt			3.0	5.0	7.0	2.0	2.0	1.0	2.0	1.0	4.0
	Val 000 DM											
Greece	Qty 000 mt		0.3	1.8	2.9	2.2	1.7	1.6	2.2	2.6	1.5	
	Val 000 dracma		2 704.0	24 800.0	36 071.0	42 705.0	31 977.0	35 164.0	58 478.0	93 034.0	74 768.0	
Indonesia	000		4.9	3.2	3.2	1.9	0.6	0.7	0.0	-	3.5	n.a.
	Val 000 $US		608.0	418.0	422.0	105.0	99.0	127.0	2.0	-	524.0	n.a.
Italy	Qty 000 mt	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1	0.5	0.5	0.4
	Val 000 000 Lira	0.0	20.0	0.0	170.0	20.0	10.0	0.0	40.0	110.0	90.0	70.0
Japan	Qty 000 mt	1.8	4.9	4.0	6.1	5.2	4.8	6.2	1.9	1.0	1.6	2.0
	Val 000 Yen	78 581.0	383 885.0	241 050.0	370 864.0	333 349.0	291 552.0	360 080.0	124 721.0	65 908.0	117 829.0	159 703.0
Morocco	Qty 000 mt	151.1	164.9	111.0	104.4	130.7	140.6	139.4	112.3	99.7	60.9	57.9
	Val 000 Dinar	3 359.5	4 523.1	3 650.3	4 044.9	5 314.5	59 978.4	61 682.0	58 935.0	62 547.0	81 593.7	48 945.0
Philippines	Qty 000 mt	2.4	2.1	1.5	6.8	10.7	7.7	7.4	1.0	2.8		
	Val 000 $US CIF	304.0	144.0	114.0	293.0	958.0	597.0	536.0	55.0	208.0		
Portugal	Qty 000 mt	3.4	3.7	-	14.0	5.0	4.0	2.0	0.7	3.4	0.4	4.6
	Val 000 Escudos	1.7	1.8	-	85.8	56.5	27.3	27.0	10.3	64.4	7.5	103.4
Spain	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Pts.	0.0	1.0	0.0	1.0	3.0	1.0	2.0	1.0	2.0	2.0	2.0
Sweden d/	Qty 000 mt	0.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
	Val 000 SEK	313.0	997.0	523.0	1 006.0	397.0	329.0	318.0	20.0	276.0	55.0	750.0
United Kingdom	Qty 000 mt	3.5	5.6	3.8	8.1	6.8	7.2	4.0	8.3	6.2	6.7	1.4
	Val 000 Pounds	187.0	380.0	387.0	891.0	952.0	1 089.0	614.0	1 209.0	1 145.0	1 365.0	301.0
EEC	Qty 000 mt	27.4	154.5	21.0	31.9	22.5	23.2	18.3	22.8	26.0	32.6	38.5
	Val 000 ECU	2 472.0	3 384.0	3 431.0	5 910.0	4 825.0	5 441.0	4 192.0	5 817.0	7 048.0	9 046.0	9 815.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Barbados, Burma, Cape Verde, Cuba, Cyprus, Finland, Guatemala, Liberia, New Zealand, Republic of Korea, and Switzerland. The following respondent reported that data were not available: Canada.

b/ Australia reported that only partial information was available.

c/ Indicates powdered manganese ore and manganese dioxide powder.

d/ For the years 1973-1975, the figures are based on the SITC 283.7.

/...

Table 3.1.15 Exports of ferro-manganese, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	b/	1.0	b/	1.0	14.0	19.0	32.0	23.0	16.0	17.0	29.0
	Val 000 $A	18.0	231.0	87.0	227.0	3 082.0	3 817.0	7 709.0	6 360.0	4 663.0	5 215.0	7 066.0
Austria	Qty 000 mt						0.0	0.0	0.0	0.0	-	-
	Val 000 dom cur						500.0	98.0	40.0	47.0	-	-
Canada	Qty 000 mt	3.0	10.2	1.2	9.9	23.1	19.9	12.0	11.3	57.0	11.7	2.6
	Val 000 $Can	565.0	2 985.0	243.0	4 039.0	8 019.0	5 987.0	2 830.0	3 802.0	25 245.0	4 647.0	902.0
China	Qty 000 mt								0.3	12.9	19.9	4.3
	Val 000 $US								128.0	7 070.0	10 010.0	3 580.0
Colombia	Qty 000 mt	0.0	0.0	3 955.0	0.0	7 783.0	2 751.0	336.0	580.0	54.0	1 303.0	
	Val 000 Peso FOB	0.0	0.0	18 418.0	0.0	35 859.0	20 844.0	1 801.0	7 881.0	4 428.0	149 448.0	
France	Qty 000 mt	374.0		267.0		269.0	321.0	347.0	321.0	382.0	176.0	283.0
	Val 000 FF	323.0		488.0		467.0	594.0	595.0	594.0	823.0	453.0	657.0
Germany, FR	Qty 000 mt			43.0	47.0	75.0	52.0	97.0	41.0	50.0	34.0	47.0
	Val 000 DM											
Italy	Qty 000 mt	4.9	9.9	4.5	2.0	1.9	9.1	7.0	2.1	6.6	4.4	4.9
	Val 000 000 Lira	1 160.0	3 350.0	2 130.0	1 230.0	1 120.0	5 540.0	4 830.0	1 730.0	5 190.0	3 810.0	4 410.0
Japan	Qty 000 mt	26.4	54.3	130.6	81.2	23.0	12.7	42.9	18.5	19.7	15.1	8.5
	Val 000 000 Yen	1 949.9	6 049.5	15 900.3	7 244.1	1 913.1	1 031.5	3 618.6	1 888.0	1 875.0	1 445.3	766.0
Spain	Qty 000 mt	29.0	36.0	17.0	39.0	29.0	47.0	53.0	31.0	32.0	22.0	16.0
	Val 000 000 Pts.	436.0	833.0	644.0	1 150.0	823.0	1 416.0	2 108.0	1 403.0	1 887.0	1 584.0	1 461.0
Sweden	Qty 000 mt	15.0	3.0	1.0	3.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
	Val 000 SEK	20 502.0	6 292.0	4 584.0	6 248.0	667.0	1 312.0	3 756.0	4 051.0	2 882.0	2 941.0	3 405.0
United Kingdom	Qty 000 mt	0.2	1.1	1.2	0.6	0.7	2.0	7.0	1.0	21.6	23.9	14.0
	Val 000 Pounds	16.0	185.0	250.0	105.0	108.0	274.0	1 289.0	201.0	2 962.0	3 957.0	2 221.0
EEC	Qty 000 mt	180.8	215.3	141.3	159.8	179.8	186.2	267.0	212.7	285.6	109.0	206.8
	Val 000 ECU	26 996.0	46 560.0	45 646.0	51 406.0	53 037.0	48 165.0	73 792.0	62 926.0	97 445.0	43 420.0	72 928.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Barbados, Brazil, Burma, Cape Verde, Cuba, Cyprus, Finland, Greece, Guatemala, Indonesia, Liberia, Morocco, New Zealand, Phillipines, Portugal, Republic of Korea, and Switzerland. The following respondent reported that data were not available: Canada.

b/ Nil or negligible.

Table 3.1.16 Exports of manganese and manganese-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Brazil c/	Qty 000 mt	22.0	9.0	15.0	22.0	57.0	80.0	83.0	74.0	99.0	96.0	173.0
	Val $US FOB	3 312.0	2 462.0	5 473.0	6 387.0	16 364.0	23 102.0	31 406.0	27 938.0	36 939.0	31 542.0	48 194.0
China	Qty 000 mt										1.6	2.6
	Val 000 $US										1 780.0	2 980.0
France	Qty 000 mt	6.5		3.8		1.9	2.2	2.3	2.2	2.9	4.0	4.6
	Val 000 FF	18.0		20.0		8.2	9.0	9.0	9.0	15.0	30.0	42.0
Italy	Qty 000 mt	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	10.0	30.0	0.0	0.0	0.0	10.0	10.0	30.0	10.0	40.0	20.0
Spain d/												
Sweden	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 SEK	939.0	2 242.0	1 166.0	1 000.0	875.0	863.0	596.0	482.0	565.0	606.0	1 178.0
United Kingdom	Qty 000 mt	0.1	0.8	0.7	0.5	0.6	0.2	0.1	0.2	0.1	0.5	0.7
	Val 000 Pounds	33.0	335.0	358.0	254.0	345.0	140.0	93.0	167.0	37.0	372.0	534.0
EEC	Qty 000 mt	2.2	2.9	1.9	1.3	0.6	0.8	0.4	1.0	1.2	2.0	5.6
	Val 000 ECU	1 125.0	2 027.0	1 863.0	1 242.0	668.0	746.0	479.0	1 096.0	1 585.0	2 878.0	8 136.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Brazil, Burma, Canada, Cape Verde, Colombia, Cuba, Cyprus, Finland, Germany, Federal Republic of, Greece, Guatemala, Indonesia, Liberia, Morocco, New Zealand, Phillipines, Portugal, Republic of Korea, and Switzerland. The following respondent reported that data were not available: Japan.
b/ Australia reported that no information was recorded separately.
c/ Includes manganese and manganese-predominating alloys, worked.
d/ Included in "other metal commodities not elsewhere specified".

Table 3.1.17 Exports of manganese and manganese-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Brazil c/												
France	Qty 000 mt	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1
	Val 000 FF	0.1		0.1		0.4	0.2	0.1	0.1	0.1	1.2	2.5
Italy	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	0.0	0.0	20.0	0.0	20.0	20.0	20.0	0.0	40.0	10.0	30.0
Spain d/												
United Kingdom	Qty 000 mt	0.4	0.3	0.6	0.2	0.4	0.2	0.3	0.2	0.1	0.3	0.5
	Val 000 Pounds	213.0	252.0	323.0	146.0	213.0	159.0	329.0	266.0	266.0	456.0	529.0
EEC	Qty 000 mt	0.0	0.1	0.4	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.5
	Val 000 ECU	9.0	361.0	582.0	315.0	232.0	312.0	532.0	717.0	764.0	811.0	945.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Burma, Canada, Cape Verde, China, Colombia, Cuba, Cyprus, Finland, Germany, Federal Republic of, Greece, Guatemala, Indonesia, Liberia, Morocco, New Zealand, Phillipines, Portugal, Republic of Korea, and Switzerland. The following respondents reported that data were not available: Japan and Sweden.
b/ Australia reported that no information was recorded separately.
c/ Included in manganese and manganese-predominating alloys, unwrought.
d/ Included in "other metal commodities not elsewhere specified".

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Table 3.2.1 Imports of copper ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	b/	b/	b/	b/	b/	b/	b/	b/	10.0	b/	b/
	Val	000 A$	b/	2.0	b/	b/	19.0	4.0	2.0	108.0	6 224.0	b/	111.0
Austria	Qty	000 mt						0.0	0.0	0.0	0.0	-	0.0
	Val	000 dom cur						198.0	957.0	1.0	372.0	-	39.0
Brazil	Qty	000 mt	-	-	-	-	-	-	-	215.0	158.0	220.0	89.0
	Val	$US CIF								520 873.0	326 728.0	352 630.0	36 953.0
Canada	Qty	000 mt	47.5	49.1	16.5	13.9	16.5	18.4	2.6	12.9	19.6	12.4	24.5
	Val	000 $Can	54 045.0	59 523.0	17 431.0	14 849.0	15 035.0	17 659.0	3 248.0	21 412.0	24 083.0	13 742.0	39 984.0
China	Qty	000 mt	2.4	3.3	37.9	52.5	77.3	20.3	39.8	84.6	58.4	95.6	96.9
	Val	000 $US										48 920.0	60 520.0
Colombia	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	10.5	8.1	
	Val	000 Peso CIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	133 010.0	136 856.0	192 406.0	
Finland	Qty	000 mt	1.3	9.7	0.4	4.4	3.3	1.9	6.2	4.0	14.7	17.1	28.3
	Val	000 dom cur											
France	Qty	000 mt	3.0		0.0		1.0	0.0	-	-	0.0	0.3	0.0
	Val	000 FF	10.0		0.0		2.3	0.0	-	-	0.0	0.7	0.5
Germany, FR	Qty	000 mt			564.0	615.0	576.0	531.0	484.0	538.0	481.0	554.0	496.0
	Val	000 DM											
Italy	Qty	000 mt	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.1	0.6
	Val	000 000 Lira	160.0	20.0	80.0	10.0	40.0	20.0	10.0	320.0	20.0	1 300.0	6 250.0
Japan	Qty	000 mt	2 973.0	3 124.0	2 605.0	2 587.0	2 823.0	2 818.0	2 969.0	3 104.0	3 338.0	3 628.0	3 135.0
	Val	000 000 Yen	315 867.1	470 548.2	239 890.3	253 331.2	239 784.6	198 485.6	331 503.7	467 063.2	368 069.7	352 217.5	350 298.0
Morocco	Qty	000 mt	0.0							0.0			
	Val	000 Dinar	0.4							0.4			
New Zealand	Qty	000 mt	b/	b/	b/	b/	b/	b/	b/	b/	2.0	b/	b/
	Val	000 dom cur	b/	b/	b/	b/	b/	1.0	b/	1.0	8.0	b/	b/
Philippines	Qty	000 mt	3.0	-	0.0	-	0.0	0.0	-	0.0	-	-	
	Val	000 $US CIF	81.0	-	0.2	-	1.8	0.9	-	7.9	-	-	
Portugal	Qty	000 mt	-	0.0	0.1	16.0	0.8	6.2	0.1	0.0	0.1	7.5	1.0
	Val	000 Escudos	-	0.0	0.6	51.0	16.0	35.7	10.0	0.4	3.2	212.5	26.0
Rep. of Korea	Qty	000 mt	6.0	6.0	8.0	19.0	25.0	15.0	35.0	64.0	105.0	108.0	102.0
	Val	000 dom cur	1 155.0	10 630.0	9 040.0	26 891.0	37 934.0	48 615.0	75 907.0	154 678.0	205 082.0	161 847.0	172 013.0
Spain	Qty	000 mt	116.0	129.0	115.0	174.0	189.0	222.0	191.0	204.0	152.0	128.0	165.0
	Val	000 000 Pts.	2 832.0	5 225.0	2 728.0	4 180.0	4 248.0	5 276.0	6 117.0	10 218.0	8 957.0	5 324.0	6 928.0
Sweden c/	Qty	000 mt	45.0	40.0	56.0	58.0	45.0	34.0	33.0	50.0	89.0	92.0	89.0
	Val	000 SEK	48 154.0	55 183.0	51 209.0	50 555.0	49 834.0	34 019.0	42 670.0	123 861.0	195 876.0	214 693.0	346 640.0
United Kingdom	Qty	000 mt	0.2	0.0	0.3	1.5	1.1	0.5	0.6	0.6	0.6	0.7	1.0
	Val	000 Pounds	71.0	24.0	140.0	665.0	293.0	139.0	384.0	517.0	244.0	184.0	315.0
EEC		000 mt	545.1	600.1	607.5	637.2	596.2	537.1	485.9	549.6	498.2	570.2	512.1
	Val	000 ECU	178 739.0	250 903.0	152 718.0	199 800.0	164 750.0	144 471.0	188 883.0	273 191.0	274 370.0	281 748.0	307 773.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, Cuba, Cyprus, Greece, Guatemala, Indonesia, Liberia, and Switzerland.

b/ Nil or negligible.

c/ For 1973-75, figures are based on SITC 283.11.

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Table 3.2.2 Imports of copper matte, cement copper and other intermediate products of copper metallurgy, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	b/	b/	b/	b/	b/	b/	c/	c/	c/	c/	c/
	Val	000 A$	b/	b/	b/	b/	b/	b/	50.0	c/	236.0	c/	c/
Austria	Qty	000 mt						-	0.0	-	-	0.0	0.0
	Val	000 dom. cur						-	17.0	-	-	213.0	67.0
Barbados	Qty	000 mt											0.0
	Val	000 $BDS											4.0
Brazil	Qty	000 mt	-	-	-	-	0.0	3.1	3.6	-	-	-	-
	Val	$US CIF	-	-	-	-	1 750.0	3 200.0	5 100.0	.	-	-	-
Canada	Qty	000 mt	d/	d/	d/	d/	d/	d/	d/	0.3	0.3	0.3	0.2
	Val	000 $Can	d/	d/	d/	d/	d/	d/	d/	792.0	799.0	767.0	543.0
Colombia	Qty	000 mt	1.2	0.2	0.0	0.0	0.0	0.0	0.0	-	-	-	
	Val	000 Peso CIF	41 263.0	8 469.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
France	Qty	000 mt	402.0		678.0		311.0	303.0	338.0	430.0	406.0	420.0	379.0
	Val	000 FF	3 065.0		3 557.0		2 035.0	1 915.0	2 862.0	4 025.0	3 872.0	4 083.0	4 117.0
Germany, FR	Qty	000 mt			123.0	132.0	127.0	116.0	75.0	63.0	70.0	88.0	80.0
	Val	000 DM											
Indonesia	Qty	000 mt	-	0.0	-	-	0.0	-	-	-	-	-	-
	Val	000 $US	-	17.0	-	-	6.0	.	-	.	.	.	-
Italy	Qty	000 mt	0.0	0.1	0.1	0.0	0.3	0.0	0.0	0.0	0.1	0.1	0.0
	Val	000 000 Lira	30.0	260.0	80.0	130.0	850.0	100.0	0.0	90.0	360.0	400.0	50.0
Japan	Qty	000 mt	427.3	270.1	212.2	236.5	273.1	333.2	396.6	293.4	331.4	374.7	250.8
	Val	000 000 Yen	180 571.1	165 826.0	84 126.1	101 933.2	100 651.0	91 348.8	158 070.2	154 456.0	136 630.8	146 959.2	95 191.1
Morocco	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
	Val	000 Dinar	15.6	28.6	26.0	0.1	0.5	0.2	0.3		0.3	0.9	
Philippines	Qty	000 mt	-	-	-	-	-	-	-	-	0.0	0.0	
	Val	000 $US CIF	.	.	.	-	-	-	-	-	6.0	6.0	
Spain	Qty	000 mt	130.0	23.0	27.0	30.0	33.0	15.0	13.0	4.0	9.0	13.0	7.0
	Val	000 000 Pts.	3 769.0	1 960.0	1 275.0	1 726.0	1 894.0	883.0	896.0	243.0	798.0	1 236.0	940.0
Sweden e/	Qty	000 mt	11.0	3.0	7.0	9.0	3.0	12.0	10.0	8.0	10.0	9.0	8.0
	Val	000 SEK	30 437.0	20 102.0	34 034.0	31 646.0	9 593.0	48 431.0	64 912.0	70 073.0	61 625.0	58 136.0	138 429.0
Switzerland	Qty	000 mt	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2
	Val	000 SF	1 212.0	1 777.0	481.0	402.0	498.0	436.0	817.0	677.0	958.0	426.0	808.0
United Kingdom	Qty	000 mt	0.0	-	-	0.0	-	1.4	0.0	-	0.0	0.0	-
	Val	000 Pounds	6.0	-	-	10.0	-	1 059.0	15.0	-	130.0	37.0	-
EEC	Qty	000 mt	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	Val	000 ECU	3 162.0	2 199.0	415.0	376.0	40 480.0	2 184.0	8 534.0	12 606.0	9 235.0	13 239.0	29 410.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Burma, Cape Verde, China, Cuba, Cyprus, Finland, Greece, Guatemala, Liberia, New Zealand, Portugal, and Republic of Korea.

b/ Data not available separately.

c/ Nil or negligible.

d/ Canada mentioned that data for those years could not be obtained.

e/ For 1973-75, figures are based on SITC 283.12.

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Table 3.2.3 Imports of copper waste and scrap, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	0.0	1.0	13.0	1.0	1.0	1.0	1.0	14.0	0.0	2.0	1.0
	Val 000 A$	2 302.0	864.0	563.0	488.0	553.0	546.0	985.0	1 972.0	1 259.0	1 162.0	1 063.0
Austria	Qty 000 mt	11.9	8.9	11.9	12.9	12.1	16.0	23.0	20.0	18.0	29.0	-
	Val 000 dom cur						139 857.0	289 945.0	351 273.0	213 738.0	263 464.0	-
Barbados	Qty 000 mt	0.0		0.0	0.0	0.0		0.0	0.0		0.0	
	Val 000 $BDS	1.0		12.0	9.0	0.0		1.0	0.0		0.0	
Brazil	Qty 000 mt	0.0	4.6	0.0	0.0	0.0	1.3	2.3	3.4	1.5	1.4	0.0
	Val $US CIF	0.0	7.5	0.0	0.0	0.0	1.3	3.1	5.7	2.2	1.7	0.0
Canada	Qty 000 mt	5.3	5.2	3.7	4.7	3.8	27.5	35.4	35.1	37.9	41.1	71.5
	Val 000 $Can	5 270.0	6 301.0	3 408.0	4 809.0	3 147.0	27 548.0	43 706.0	69 423.0	44 163.0	42 819.0	75 727.0
China	Qty 000 mt											0.1
	Val 000 $US											110.0
Colombia	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Val 000 Peso CIF	1.0	220.0	0.0	0.0	0.0	0.0	0.0	6 421.0	6 054.0	7 219.0	
Cyprus	Qty 000 mt	-	-	-	-	-	-	-	-	-	0.0	-
	Val 000 Cy. Pd.	-	-	-	-	-	-	-	-	-	3.0	-
Finland	Qty 000 mt	0.0	0.0	0.1	0.2	0.5	0.3	0.9	0.5	0.0	0.0	0.3
	Val 000 dom cur											
France	Qty 000 mt	14.0		14.0		15.0	19.0	25.0	37.0	460.0	29.0	12.0
	Val 000 FF	65.0		65.0		81.0	86.0	138.0	246.0	4 237.0	194.0	255.0
Germany, FR	Qty 000 mt			89.0	115.0	110.0	138.0	169.0	178.0	150.0	177.0	205.0
	Val 000 DM											
Indonesia	Qty 000 mt	-	-	0.0	-	-	-	-	-	-	0.0	0.5
	Val 000 $US	-	-	32.0	-	-	-	-	-	-	55.0	95 144.0
Italy	Qty 000 mt	45.0	53.2	42.9	52.8	56.2	54.5	58.6	78.6	47.8	56.7	65.7
	Val 000 000 Lira	32 990.0	59 410.0	33 960.0	53 530.0	60 010.0	55 110.0	71 240.0	114 310.0	69 880.0	91 690.0	115 420.0
Japan	Qty 000 mt	21.0	3.2	9.3	5.0	41.0	55.0	50.2	49.9	51.9	56.4	57.5
	Val 000 000 Yen	7 510.4	1 511.2	3 515.5	2 244.0	11 350.6	12 822.3	14 749.5	18 768.1	17 409.9	18 029.1	17 521.1
Morocco	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
	Val 000 Dinar	0.1	0.6	2.0	0.0	0.1	9.0		0.3	17.4	62.0	67.3
New Zealand	Qty 000 mt	b/	4.0	2.0	b/	2.0	2.0	9.0	b/	b/	50.0	1.0
	Val 000 dom cur	b/	2.0	1.0	b/	4.0	2.0	15.0	b/	1.0	52.0	2.0
Philippines	Qty 000 mt	0.1	-	-	-	0.0	0.0	-	0.2	0.0	-	
	Val 000 $US CIF	76.0	-	-	-	25.0	3.6	-	46.0	35.0	-	
Rep. of Korea	Qty 000 mt						58.0	55.0	14.0	30.0	46.0	45.0
	Val 000 dom cur											
Spain	Qty 000 mt	19.0	12.0	16.0	9.0	7.0	5.0	19.0	0.0	32.0	44.0	17.0
	Val 000 000 Pts.	1 396.0	1 142.0	948.0	596.0	419.0	437.0	1 365.0	41.0	3 904.0	5 305.0	2 932.0
Sweden c/	Qty 000 mt	6.0	5.0	8.0	3.0	3.0	4.0	6.0	6.0	3.0	11.0	22.0
	Val 000 SEK	19 131.0	22 643.0	31 183.0	15 816.0	21 105.0	20 697.0	27 528.0	48 169.0	28 491.0	106 659.0	240 453.0
Switzerland	Qty 000 mt	0.5	2.0	4.2	1.9	4.3	5.0	3.4	3.6	4.0	3.7	2.2
	Val 000 SF	1 836.0	7 580.0	12 252.0	4 641.0	10 281.0	9 558.0	7 319.0	11 387.0	8 357.0	8 168.0	5 005.0
United Kingdom	Qty 000 mt	23.7	16.0	9.6	11.9	12.4	9.7	10.5	9.3	8.1	10.0	10.0
	Val 000 Pounds	10 325.0	10 544.0	4 653.0	7 266.0	11 919.0	8 168.0	9 009.0	6 939.0	6 404.0	6 337.0	7 989.0
EEC	Qty 000 mt	70.7	122.4	86.0	82.5	62.2	55.4	84.2	127.5	56.7	79.0	103.4
	Val 000 ECU	53 799.0	160 547.0	70 364.0	72 841.0	65 087.0	51 250.0	91 500.0	156 456.0	77 842.0	112 422.0	168 242.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Burma, Cape Verde, Cuba, Greece, Guatemala, Liberia, and Portugal.

b/ Nil or negligible.

c/ For 1973-75, figures are based on SITC 284.02.

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Table 3.2.4 Imports of copper and copper-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	b/	b/	b/	b/	b/	b/	5.0	c/	2.0	2.0	4.0
	Val	000 A$	b/	b/	b/	b/	b/	b/	597.0	558.0	6 284.0	8 459.0	3 284.0
Austria	Qty	000 mt						21.0	13.0	16.0	13.0	15.0	11.0
	Val	000 dom cur						412 574.0	340 308.0	488 686.0	390 220.0	419 544.0	345 807.0
Barbados	Qty	000 mt				0.0	0.0	0.0	0.0	0.0		0.0	0.0
	Val	000$BDS				5.0	16.0	6.0	1.0	0.0	46.0	0.0	2.0
Brazil	Qty	000 mt	96.0	132.0	128.0	150.0	182.0	157.0	190.0	208.0	152.0	204.0	56.0
	Val	$US CIF	250 698.0	306 696.0	169 814.0	210 618.0	248 822.0	203 808.0	352 728.0	466 262.0	282 846.0	311 867.0	88 511.0
Burma	Qty	mt	3.0	7.0	107.0	14.0	13.0	4.0	47.0	72.0	86.0	5.0	n.a.
	Val	000 Kyat	22.0	78.0	1 063.0	124.0	142.0	38.0	576.0	623.0	710.0	62.0	-
Canada	Qty	000 mt	26.0	32.1	17.5	19.9	29.3	33.2	43.1	24.5	38.3	40.8	44.0
	Val	000 $Can	38 500.0	60 325.0	26 433.0	30 487.0	46 169.0	58 062.0	98 508.0	61 466.0	90 008.0	81 615.0	101 329.0
China d/	Qty	000 mt	193.3	173.3	112.5	67.3	91.2	134.1	134.2	128.2	46.5	152.4	522.9
	Val	000 $US									99 070.0	225 750.0	893 160.0
Colombia	Qty	000 mt	0.0	2.8	7.2	5.9	8.2	14.1	12.6	14.7	12.8	13.8	
	Val	000 000 Peso CIF	0.4	166.4	363.9	348.4	492.0	856.1	1 081.0	1 702.0	1 701.9	1 752.1	
Cuba	Qty	000 mt			6.9	-	3.8	4.1	7.9	7.3	7.9	8.0	
	Val	000 Peso			10 600.0	-	6 100.0	5 600.0	10 900.0	10 000.0	11 600.0	12 300.0	
Cyprus	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	Val	000 Cy. Pd.	4.0	9.0	9.0	9.0	12.0	11.0	10.0	27.0	36.0	14.0	18.0
France	Qty	000 mt	0.3		0.9		0.4	0.7	0.3	0.3	0.3	0.8	0.8
	Val	000 FF	2.2		5.2		3.3	2.0	3.8	3.2	4.6	11.8	13.0
Germany, FR	Qty	000 mt			433.0	410.0	448.0	485.0	504.0	494.0	423.0	458.0	443.0
	Val	000 DM											
Indonesia	Qty	000 mt	0.1	0.6	0.8	0.4	0.3	0.3	5.1	12.2	15.0	18.1	17.0
	Val	000 $US	86.0	992.0	936.0	455.0	450.0	413.0	10 088.0	30 612.0	29 237.0	29 906.0	28 213.0
Italy	Qty	000 mt	304.7	351.8	312.4	339.5	351.7	411.3	430.2	483.7	398.6	398.1	395.8
	Val	000 000 Lira	288 070.0	515 690.0	278 300.0	410 770.0	454 460.0	527 430.0	762 770.0	1 008 350.0	875 890.0	907 230.0	1 061 120.0
Japan	Qty	000 mt	0.0	0.0	0.0	1.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1
	Val	000 000 Yen	1.1	12.0	0.0	153.0	37.2	51.7	156.2	225.3	61.7	239.4	147.1
Morocco	Qty	000 mt	0.0	0.0	0.0	0.0	0.1	0.0	0.0		74.3	50.0	73.0
	Val	000 Dinar	0.0	0.1	2.4	1.0	85.2	60.3	135.1		590.0	400.1	643.0
New Zealand	Qty	000 mt	945.0	2 296.0	1 081.0	1 144.0	2 250.0	1 241.0	2 454.0	3 068.0	1 551.0	2 560.0	1 883.0
	Val	000 dom cur	1 045.0	3 893.0	1 659.0	1 501.0	3 854.0	1 901.0	4 229.0	7 550.0	3 703.0	5 988.0	5 039.0
Philippines	Qty	000 mt	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	
	Val	000 $US CIF	222.0	712.0	98.0	173.0	220.0	183.0	66.0	66.0	213.0	19.0	
Spain	Qty	000 mt	51.0	45.0	55.0	45.0	54.0	38.0	52.0	59.0	51.0	36.0	39.0
	Val	000 000 Pts.	4 347.0	5 676.0	3 955.0	4 048.0	5 134.0	3 794.0	6 280.0	7 758.0	7 767.0	5 594.0	8 096.0
Sweden	Qty	000 mt	63.0	70.0	75.0	70.0	52.0	75.0	75.0	77.0	66.0	77.0	76.0
	Val	000 SEK	421 292.0	674 089.0	405 050.0	408 854.0	311 787.0	459 927.0	627 234.0	739 772.0	609 084.0	778 779.0	941 726.0
Switzerland	Qty	000 mt	28.2	32.4	35.0	22.8	26.6	23.1	11.9	10.4	11.0	9.3	8.9
	Val	000 SF	141 244.0	205 891.0	127 851.0	81 437.0	90 175.0	58 549.0	39 627.0	40 798.0	40 564.0	30 848.0	32 383.0
United Kingdom	Qty	000 mt	467.1	471.6	452.0	435.5	444.7	405.3	377.7	346.5	282.1	324.8	284.9
	Val	000 Pounds	102 696.0	421 682.0	251 142.0	328 476.0	338 840.0	284 356.0	346 461.0	347 491.0	251 852.0	284 783.0	307 603.0
EEC	Qty	000 mt	1 421.5	1 840.6	1 856.8	1 918.2	1 949.1	1 873.2	1 821.0	1 865.2	1 721.8	1 774.2	1 282.4
	Val	000 000 ECU	1 298.1	3 079.0	1 759.3	2 294.9	2 218.6	1 934.8	2 529.5	3 048.2	2 768.1	2 755.6	2 932.3

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Cape Verde, Finland, Greece, Guatemala, Liberia, Portugal, and Republic of Korea.

b/ Data not available separately.

c/ Nil or negligible.

d/ Includes copper alloys, unwrought and worked, copper foil, copper powder, copper piping and accompanying bolts and nuts.

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Table 3.2.5 Imports of copper and copper-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/	Qty 000 mt											
	Val 000 A$	6 548.0	13 742.0	5 665.0	11 093.0	11 883.0	13 496.0	17 890.0	20 418.0	25 575.0	26 166.0	24 040.0
Austria	Qty 000 mt	11.2	15.2	14.6	25.2	33.3	43.0	53.0	62.0	63.0	56.0	60.0
	Val 000 000 dom. cur.						1 216.9	1 763.4	2 262.9	2 241.6	1 959.7	2 236.2
Barbados	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 $BDS	226.0	195.0	236.0	198.0	525.0	647.0	1 019.0	1 998.0	996.0	1 089.0	806.0
Brazil	Qty 000 mt	2.1	3.4	2.4	1.9	2.8	1.8	1.8	2.3	3.0	2.4	2.1
	Val $US CIF	10.8	14.1	12.1	19.3	12.9	12.3	12.7	16.9	20.1	16.7	12.5
Burma	Qty mt	250.0	230.0	184.0	263.0	487.0	454.0	346.0	272.0	1 802.0	349.0	n.a.
	Val 000 Kyat	1 896.0	2 696.0	2 243.0	2 495.0	4 753.0	5 477.0	5 062.0	5 182.0	21 560.0	3 111.0	-
Canada	Qty 000 mt	17.6	13.4	13.0	17.7	18.9	21.2	19.1	17.2	23.5	14.8	19.1
	Val 000 $Can	56 457.0	65 004.0	64 366.0	67 112.0	83 878.0	72 785.0	44 189.0	70 404.0	103 655.0	57 733.0	74 820.0
Colombia	Qty 000 mt	3.9	8.2	.	.	..	-	-	-	-	-	
	Val 000 000 Peso CIF	123.9	516.7	-	-	-	-	-	-	.	-	
Cyprus	Qty 000 mt	0.3	0.3	0.1	0.2	0.4	0.3	0.4	0.6	0.5	0.9	0.8
	Val 000 Cy. Pd.	224.0	295.0	144.0	203.0	374.0	340.0	526.0	801.0	785.0	1 172.0	1 124.0
France	Qty 000 mt	106.0		91.0		203.0	232.0	204.0	206.0	168.0	181.0	162.0
	Val 000 FF	691.0		742.0		1 758.0	1 757.0	2 177.0	2 496.0	2 112.0	2 421.0	2 666.0
Germany, FR	Qty 000 mt			116.0	145.0	157.0	165.0	180.0	226.0	195.0	216.0	219.0
	Val 000 DM											
Guatemala	Qty 000 mt			0.3	0.3		0.6	0.4	0.5	0.3		
	Val 000 dom cur											
Indonesia	Qty 000 mt	5.9	6.1	6.3	11.2	14.5	18.0	15.8	10.4	10.7	11.3	8.1
	Val 000 $US	8 494.0	13 531.0	11 162.0	18 710.0	24 937.0	31 144.0	34 395.0	24 835.0	27 966.0	27 540.0	16 822.0
Italy	Qty 000 mt	10.0	11.0	8.4	13.3	16.7	19.1	24.4	33.6	21.7	19.6	20.1
	Val 000 000 Lira	17 300.0	27 980.0	19 410.0	31 500.0	46 580.0	52 600.0	80 030.0	122 800.0	92 750.0	89 650.0	102 270.0
Japan	Qty 000 mt	12.1	16.7	1.7	1.4	1.2	1.3	3.2	3.2	3.2	2.8	4.5
	Val 000 000 Yen	8 194.4	14 795.4	2 777.8	2 316.2	2 310.0	1 787.1	4 519.1	5 082.7	4 959.9	4 954.6	5 550.6
Liberia	Qty 000 mt	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.0		
	Val 000 $US	37.2	148.3	160.5	130.1	541.4	112.7	110.6	116.8	63.1		
Morocco	Qty 000 mt	0.0	0.0				0.2	0.3	0.3	0.5	0.6	0.7
	Val 000 Dinar	1.4	0.1				1.1	1.6	2.3	3.9	4.5	5.9
New Zealand	Qty 000 mt	10 783.0	13 037.0	11 934.0	11 211.0	12 546.0	11 061.0	11 712.0	9 609.0	10 654.0	13 418.0	12 503.0
	Val 000 dom cur	13 916.0	24 573.0	21 788.0	19 072.0	26 878.0	20 271.0	26 008.0	30 285.0	31 115.0	40 842.0	38 937.0
Philippines	Qty 000 mt	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-
	Val 000 $US CIF	74.0	127.0	16.0	112.0	-	.	.	.	.	.	-
Rep. of Korea	Qty 000 mt			6.0	10.0	10.0	14.0	13.0	10.0	24.0	30.0	35.0
	Val 000 dom cur											
Spain	Qty 000 mt	17.0	15.0	13.0	18.0	22.0	17.0	28.0	108.0	55.0	31.0	40.0
	Val 000 000 Pts.	2 167.0	2 836.0	2 079.0	2 930.0	4 185.0	3 771.0	5 788.0	9 660.0	12 308.0	7 208.0	14 920.0
Sweden	Qty 000 mt	26.0	27.0	29.0	33.0	32.0	33.0	7.0	36.0	31.0	29.0	30.0
	Val 000 000 SEK	252.1	377.7	305.0	327.1	339.7	393.6	505.1	579.5	504.6	528.5	641.3
Switzerland	Qty 000 mt	43.8	59.2	46.9	40.8	56.1	64.7	80.1	90.5	80.8	78.5	73.5
	Val 000 000 SF	284.7	489.6	248.3	212.8	286.5	274.0	378.7	495.8	423.2	374.5	382.5
United Kingdom	Qty 000 mt	40.3	45.3	23.8	33.8	42.9	66.5	103.6	77.6	88.5	99.9	92.1
	Val 000 000 Pound	37.1	50.3	26.8	41.9	59.2	87.8	157.9	130.7	128.6	150.8	166.1
EEC	Qty 000 mt	22.8	64.0	49.3	76.9	87.3	104.3	143.5	166.8	111.3	116.9	116.2
	Val 000 000 ECU	47.0	158.9	91.1	151.5	191.6	209.0	337.4	437.5	318.5	338.1	376.6

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Cape Verde, China, Cuba, Finland, Greece, and Portugal.

b/ Date on quantity not available due to incompatibility of units.

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Table 3.2.6 Imports of nickel ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	b/	c/	c/	c/	c/	c/	c/	1.0	b/	b/	b/
	Val 000 A$	b/	c/	c/	c/	c/	c/	c/	280.0	b/	b/	11.0
Austria	Qty 000 mt						-	-	-	0.0	-	0.0
	Val 000 dom cur						-	-	-	85.0	-	4.0
Brazil	Qty 000 mt	-	-	-	-	0.0	-	-	-	-	-	-
	Val 000 $US CIF	-	-	-	-	5.8	.	.	.	.	.	-
Canada	Qty 000 mt	3.7	10.7	17.9	24.6	32.8	31.9	21.2	26.1	23.8	22.4	29.3
	Val 000 $Can	9 001.0	16 802.0	45 074.0	48 567.0	57 717.0	31 094.0	49 499.0	69 668.0	59 206.0	42 632.0	49 269.0
Cyprus	Qty 000 mt	-	-	-	-	-	.	.	.	.	0.0	-
	Val 000 Cy. Pd.	.	-	.	-	-	-	-	-	-	1.0	-
Finland	Qty 000 mt	0.5	0.5	0.3	0.5	0.5	0.5	0.6	0.4	0.5	0.4	0.5
	Val 000 dom cur											
Germany, FR	Qty 000 mt			-	0.0	-	0.0	-	0.0	0.0	1.0	0.0
	Val 000 DM											
Indonesia	Qty 000 mt	-	-	0.0	-	0.0	-	-	-	-	-	-
	Val 000 $US	-	-	1.0	-	3.0	.	.	.	.	.	-
Italy	Qty 000 mt	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	0.0	0.0	0.0	0.0	500.0	10.0	10.0	10.0	0.0	0.0	10.0
Japan	Qty 000 mt	3 539.4	4 218.3	3 396.8	3 450.2	3 951.1	2 999.4	4 014.8	3 950.3	3 462.8	2 996.8	2 297.1
	Val 000 000 Yen	29 128.0	41 114.0	34 735.0	38 910.0	40 197.0	20 053.0	27 903.0	41 787.0	33 815.0	30 721.0	18 347.0
Morocco	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 Dinar	4.4	23.8	13.3	39.4	4.0	88.3	112.3	188.1	531.1	391.8	583.0
New Zealand	Qty 000 mt	b/	b/	b/	b/	b/	b/	b/	b/	b/	b/	35.0
	Val 000 dom cur	b/	b/	b/	b/	b/	b/	b/	b/	b/	b/	267.0
Philippines	Qty 000 mt	-	-	-	-	-	18.0	-	-	-	-	
	Val 000 $US CIF	-	-	-	-	-	89.0	.	-	-	-	
Portugal	Qty 000 mt	-	-	-	0.0	-	-	-	-	-	-	.
	Val 000 escudos	-	-	-	0.0	.	.	.	.	.	.	-
Spain	Qty 000 mt	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-
	Val 000 000 Pts.	1.0	1.0	-	31.0	199.0	162.0	518.0	-	-	7.0	-
Sweden d/	Qty 000 mt	-	-	-	0.0	0.0	-	0.0	-	4.0	-	-
	Val 000 SEK	-	-	-	44.0	78.0	-	97.0	-	2 660.0	-	-
EEC	Qty 000 mt	13.1			0.8	20.0	0.2	0.1	0.0	0.2	0.5	0.1
	Val 000 ECU	574.0	-	-	48.0	534.0	58.0	658.0	128.0	606.0	827.0	180.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Barbados, Burma, Cape Verde, China, Colombia, Cuba, France, Greece, Guatemala, Liberia, Republic of Korea, Switzerland and United Kingdom.

b/ Nil or negligible

c/ Included in "other metal commodities not elsewhere specified".

d/ Figures are based on the SITC 283.21 for the years 1973-74.

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Table 3.2.7 Import of nickel matte, nickel sinter and other intermediate products of nickel metallurgy, by country, 1973-1983

Country a/	Quantity/ Value Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	177.0	b/	1.0	2.0	3.0	2.0	3.0	2.0	b/	b/	b/
	Val 000 A$	3 681.0	845.0	1 262.0	5 274.0	9 841.0	4 683.0	9 429.0	8 437.0	b/	166.0	239.0
Austria	Qty 000 mt						1.0	2.0	1.0	1.0	1.0	1.0
	Val 000 dom cur						73 260.0	88 859.0	95 862.0	69 418.0	69 721.0	44 103.0
Barbados	Qty 000 mt							0.0				0.0
	Val 000 $BDS							9.0		27.0		0.0
Brazil	Qty 000 mt	-	-	-	-	1.8	2.5	2.4	2.6	0.0	-	-
	Val 000 $US CIF	-	-	-	-	9 674.0	11 528.0	12 868.0	13 593.0	28.0	-	-
Canada c/												
Colombia	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
	Val 000 Peso CIF	159.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
Cyprus	Qty 000 mt	0.0	-	0.0	-	-	-	-	-	0.0	-	0.0
	Val 000 Cy. Pd.	1.0	-	1.0	-	-	-	-	-	1.0	-	3.0
Finland	Qty 000 mt	0.0	1.0	0.0	1.5	1.6	2.1	6.5	6.5	6.1	6.4	8.9
	Val 000 dom cur											
France d/	Qty 000 mt	0.2	1.2	1.3	1.2	1.5	1.8	2.8	2.3	1.1	0.6	1.0
	Val 000 000 FF	3.0	25.2	30.4	33.3	45.4	42.4	77.6	59.9	48.8	29.6	45.6
Germany, FR	Qty 000 mt			7.0	14.0	16.0	16.0	16.0	14.0	12.0	14.0	11.0
	Val 000 DM											
Indonesia	Qty 000 mt	-	-	-	0.0	0.0	0.0	-	0.0	0.0	-	-
	Val 000 $US	-	-	-	12.0	9.0	4.0	-	19.0	32.0	-	-
Italy	Qty 000 mt	3.9	3.5	3.7	4.1	4.2	5.7	4.3	2.0	1.3	1.5	2.0
	Val 000 000 Lira	8 090.0	8 220.0	11 400.0	18 040.0	19 260.0	23 110.0	18 920.0	13 540.0	12 220.0	13 650.0	14 250.0
Japan	Qty 000 mt	30.4	39.8	27.5	45.2	41.0	30.0	43.3	53.5	38.0	41.8	38.3
	Val 000 000 Yen	16 981.0	27 212.0	22 057.0	40 317.0	34 476.0	17 879.0	35 418.0	60 762.0	39 972.0	45 821.0	38 107.0
Morocco	Qty 000 mt	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
	Val 000 Dinar	0.3	6.6		2.6	10.3	194.6		210.8	491.0	415.4	302.6
New Zealand	Qty 000 mt	b/	b/	b/	b/	b/	7.0	b/	51.0	10.0	18.0	b/
	Val 000 dom cur	b/	b/	b/	b/	b/	31.0	b/	343.0	131.0	146.0	1.0
Rep. of Korea	Qty 000 mt	40.0	50.0	35.0	53.0	67.0	69.0	72.0	31.0			1.0
	Val 000 $US	139.1	185.7	149.4	246.3	310.1	315.6	357.0	199.2			2.9
Spain	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	3.0	2.0	0.0	2.0	2.0	3.0
	Val 000 000 Pts.	85.0	28.0	51.0	76.0	274.0	865.0	625.0	44.0	1 242.0	1 194.0	1 506.0
Sweden e/	Qty 000 mt	4.0	2.0	3.0	5.0	2.0	5.0	3.0	4.0	3.0	2.0	4.0
	Val 000 SEK	43 684.0	22 173.0	44 049.0	80 677.0	45 974.0	89 935.0	69 828.0	111 502.0	95 639.0	88 657.0	135 456.0
United Kingdom	Qty 000 mt	48.2	49.9	66.9	54.4	61.4	31.7	27.8	38.3	41.2	15.0	25.9
	Val 000 pounds	39 323.0	46 767.0	74 252.0	82 587.0	105 638.0	43 894.0	45 399.0	67 386.0	91 338.0	35 404.0	68 084.0
EEC	Qty mt	25 633.0	74 086.0	93 701.0	90 513.0	102 481.0	70 066.0	61 444.0	72 511.0	75 349.0	39 339.0	43 525.0
	Val 000 ECU	47 204.0	138 419.0	193 925.0	251 933.0	292 208.0	179 891.0	171 366.0	243 531.0	319 939.0	177 159.0	184 126.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Burma, Cape Verde, China, Cuba, Greece, Guatemala, Liberia, Philippines, Portugal and Switzerland.

b/ Nil or negligible.

c/ Canada mentioned that data on this item could not be obtained.

d/ Does not include imports of Metropolitan France from New Caledonia.

e/ Figures are based on the SITC 283.22 for the years 1973-74.

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Table 3.2.8 Imports of nickel waste and scrap, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	b/	b/	b/	b/	b/	b/	b/	b/	b/	b/	b/
	Val 000 A$	4.0	24.0	26.0	10.0	61.0	c/	b/	16.0	181.0	95.0	16.0
Austria	Qty 000 mt						0.0	2.0	2.0	1.0	0.0	-
	Val 000 dom cur						11 184.0	45 752.0	43 252.0	29 541.0	17 431.0	-
Barbados	Qty 000 mt				0.0	0.0						
	Val 000 $BDS				69.0	10.0						
Canada d/												
Colombia	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
	Val 000 Peso CIF	1 700.0	1 118.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
Finland	Qty 000 mt	0.0	0.0	0.6	0.8	1.0	0.4	0.9	1.2	0.6	0.6	0.6
	Val 000 dom cur											
France	Qty 000 mt	1.1	0.9	0.8	0.8	0.8	0.4	0.7	0.4	0.5	0.3	0.3
	Val 000 000 FF	18.7	13.2	12.6	12.0	10.9	6.9	15.1	17.0	10.3	12.9	21.8
Germany, FR	Qty 000 mt			6.0	7.0	5.0	4.0	7.0	8.0	5.0	6.0	5.0
	Val 000 DM											
Indonesia	Qty 000 mt	-	-	0.0	0.0	-	-	-	-	-	-	.
	Val 000 $US	-	-	43.0	1.0	.	.	.	.	.	.	.
Italy	Qty 000 mt	1.2	1.3	0.8	1.3	0.8	0.3	0.3	0.6	0.3	0.2	0.2
	Val 000 000 Lira	1 710.0	2 600.0	2 220.0	4 280.0	3 090.0	920.0	1 470.0	3 090.0	2 270.0	1 080.0	610.0
Japan	Qty 000 mt	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2
	Val 000 000 yen	80.0	20.0	0.0	79.0	81.0	68.0	17.0	50.0	40.0	17.0	219.0
Morocco	Qty 000 mt	0.0										
	Val 000 Dinar	3.5										
New Zealand	Qty 000 mt	b/	b/	b/	b/	b/	7.0	b/	1.0	6.0	1.0	5.0
	Val 000 dom cur	b/	b/	b/	b/	b/	32.0	b/	11.0	43.0	10.0	39.0
Rep. of Korea	Qty 000 mt		651.0	159.0	226.0	104.0		77.0	10.0	4.0	307.0	167.0
	Val 000 $US		1 849.0	345.0	487.0	483.0		334.0	90.0	11.0	1 820.0	812.0
Spain	Qty 000 mt	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Pts.	10.0	1.0	7.0	4.0	2.0	-	13.0	2.0	3.0	7.0	2.0
Sweden e/	Qty 000 mt	0.0	1.0	2.0	3.0	2.0	2.0	3.0	3.0	2.0	3.0	3.0
	Val 000 SEK	2 287.0	5 772.0	14 553.0	22 096.0	19 073.0	18 643.0	39 786.0	41 766.0	38 684.0	58 708.0	61 267.0
Switzerland	Qty 000 mt	0.0	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1
	Val 000 SF	148.0	378.0	687.0	1 169.0	926.0	263.0	1 525.0	1 049.0	1 201.0	807.0	460.0
United Kingdom	Qty 000 mt	4.8	4.2	2.7	4.2	3.5	2.8	3.1	2.2	2.4	3.4	2.3
	Val 000 Pounds	2 490.0	2 840.0	2 173.0	3 967.0	4 306.0	4 169.0	5 334.0	3 837.0	3 949.0	5 831.0	3 648.0
EEC	Qty 000 mt	9.3	8.5	7.0	7.5	5.5	4.2	5.0	6.3	3.9	5.9	3.1
	Val 000 ECU	9 212.0	13 001.0	10 182.0	14 577.0	10 794.0	8 457.0	11 284.0	17 138.0	10 723.0	13 500.0	7 325.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Brazil, Burma, Cape Verde, China, Cuba, Cyprus, Greece, Guatemala, Liberia, Philippines and Portugal.

b/ Nil or negligible.

c/ Includes in "other metal commodities not elsewhere specified".

d/ Figures for nickel waste and scrap are included in those for nickel ores and concentrates.

e/ Figures are based on the SITC 284.03 for the years 1973-74.

Table 3.2.9 Imports of nickel and nickel-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	2.0	2.0	1.0	2.0	1.0	3.0	1.0	2.0	2.0	2.0	b/
	Val	000 A$	4 828.0	5 354.0	4 138.0	6 408.0	4 649.0	12 703.0	3 988.0	9 887.0	8 409.0	11 185.0	1 160.0
Austria	Qty	000 mt	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0	3.0
	Val	000 dom cur						156 230.0	196 190.0	205 967.0	259 479.0	202 818.0	210 074.0
Barbados	Qty	000 mt				0.0		0.0		0.0			
	Val	000 $BDS				2.0		9.0		22.0			
Brazil	Qty	000 mt	1.8	3.3	1.5	2.0	2.5	3.5	4.6	8.8	6.2	2.1	0.0
	Val	$US CIF	5 995.0	12 596.0	6 952.0	9 834.0	12 651.0	15 773.0	23 033.0	55 645.0	46 517.0	14 358.0	1 179.0
Canada	Qty	000 mt	15.7	16.1	13.4	17.3	3.0	4.0	4.4	5.2	2.9	3.5	3.4
	Val	000 $Can	53 583.0	62 271.0	61 364.0	86 805.0	14 996.0	12 487.0	25 551.0	27 924.0	23 792.0	24 018.0	22 591.0
China	Qty	000 mt	30.0	39.3	3.8	4.8	2.1	3.5	2.2	-	-	0.0	0.2
	Val	000 $US							11 560.0			110.0	980.0
Colombia	Qty	000 mt	0.0	0.0	2.8	0.2	0.2	0.3	0.3	0.4	0.4	0.3	
	Val	000 Peso CIF	1 895.0	248.0	54 509.0	49 214.0	51 752.0	57 638.0	85 452.0	127 477.0	168 566.0	134 067.0	
Cyprus	Qty	000 mt	-	-	-	-	-	.	.	.	0.0	0.0	0.0
	Val	000 Cy. Pd.	.	-	-	-	-	-	-	-	2.0	6.0	2.0
France	Qty	000 mt	10.4	14.9	16.5	15.7	11.4	13.5	17.9	20.3	18.4	17.9	19.2
	Val	000 000 FF	159.7	278.1	327.3	374.8	294.8	311.1	483.0	706.8	757.2	729.2	706.0
Germany, FR	Qty	000 mt			36.0	43.0	36.0	39.0	48.0	40.0	40.0	41.0	45.0
	Val	000 DM											
Italy	Qty	000 mt	12.9	13.9	6.7	7.5	11.0	11.6	16.1	18.5	11.9	17.4	14.0
	Val	000 000 Lira	25 650.0	34 160.0	19 910.0	31 360.0	47 410.0	42 900.0	68 820.0	107 180.0	91 060.0	132 570.0	94 830.0
Japan	Qty	000 mt	15.0	16.5	8.5	12.2	11.1	10.7	19.6	15.5	17.8	19.9	27.0
	Val	000 000 yen	13 518.0	17 440.0	10 702.0	16 186.0	13 900.0	9 540.0	21 357.0	23 637.0	25 503.0	28 079.0	30 834.0
Morocco	Qty	000 mt	0.0	0.0	0.0			0.0		0.0		0.0	0.0
	Val	000 Dinar	3.3	0.2	0.2			30.8		50.1		65.7	26.0
New Zealand	Qty	000 mt	87.0	250.0	105.0	38.0	6.0	100.0	38.0	56.0	116.0	142.0	10.0
	Val	000 dom cur	242.0	579.0	307.0	134.0	28.0	447.0	133.0	357.0	792.0	932.0	98.0
Philippines	Qty	000 mt	0.0	0.1	0.0		0.0	0.1	0.1	0.1	0.1	0.1	
	Val	000 $US CIF	118.0	335.0	115.0		198.0	315.0	370.0	579.0	406.0	424.0	
Rep. of Korea	Qty	000 mt	286.0	485.0	541.0	1 530.0	587.0	1 187.0	1 927.0	2 854.0	3 812.0	2 451.0	2 001.0
	Val	000 $US	1 045.0	1 153.0	2 287.0	7 258.0	2 887.0	5 188.0	9 274.0	14 865.0	26 539.0	14 747.0	10 029.0
Spain	Qty	000 mt	5.0	6.0	5.0	8.0	11.0	7.0	6.0	6.0	4.0	5.0	5.0
	Val	000 000 Pts.	860.0	1 131.0	1 114.0	2 139.0	3 235.0	1 939.0	1 878.0	2 682.0	2 214.0	2 991.0	3 828.0
Sweden	Qty	000 mt	12.0	13.0	14.0	11.0	8.0	8.0	12.0	11.0	8.0	11.0	10.0
	Val	000 SEK	174 701.0	225 329.0	246 760.0	231 864.0	176 651.0	160 696.0	254 959.0	321 188.0	273 875.0	394 780.0	362 435.0
Switzerland	Qty	000 mt	1.1	1.3	1.7	2.0	1.3	1.5	1.6	1.3	1.2	1.0	0.9
	Val	000 SF	11 736.0	15 110.0	20 114.0	24 591.0	15 595.0	11 965.0	13 930.0	15 547.0	14 809.0	11 177.0	9 180.0
United Kingdom	Qty	000 mt	23.9	24.8	23.9	20.7	21.5	16.8	18.0	18.2	16.9	15.2	10.9
	Val	000 pounds	29 645.0	35 330.0	40 922.0	49 646.0	54 113.0	35 177.0	46 233.0	55 716.0	57 824.0	49 670.0	35 428.0
EEC	Qty	000 mt	65.7	79.1	69.4	73.1	65.0	68.4	88.5	88.6	75.5	81.6	77.5
	Val	000 ECU	178 251.0	233 441.0	217 853.0	303 414.0	264 072.0	225 707.0	340 838.0	440 293.0	447 634.0	452 285.0	397 248.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Burma, Cape Verde, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia and Portugal.

b/ Nil or negligible.

Table 3.2.10 Imports of nickel and nickel-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	1.0	2.0	2.0	1.0	1.0	1.0	4.0	2.0	1.0	3.0	-
	Val	000 A$	2 512.0	4 990.0	5 403.0	6 255.0	5 603.0	6 829.0	7 576.0	12 122.0	9 501.0	7 179.0	4 497.0
Austria	Qty	000 mt	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0
	Val	000 dom cur						90 446.0	97 554.0	103 532.0	89 470.0	94 533.0	94 665.0
Barbados	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
	Val	000 $BDS	9.0	12.0	17.0	43.0	79.0	119.0	109.0	147.0	245.0	176.0	140.0
Brazil	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val	$US CIF	331.0	423.0	750.0	2 314.0	2 134.0	1 099.0	2 461.0	1 680.0	1 825.0	1 365.0	206.0
Canada	Qty	000 mt	3.6	6.1	4.2	4.0	5.0	5.0	6.9	3.1	3.9	3.2	2.2
	Val	000 $Can	18 089.0	30 667.0	35 225.0	33 880.0	42 030.0	42 098.0	65 537.0	50 516.0	68 607.0	42 452.0	29 507.0
China	Qty	000 mt										0.0	0.6
	Val	000 $US										60.0	3 210.0
Colombia	Qty	000 mt	0.2	0.2	2.8	-	-	-	-	-	-	-	
	Val	000 Peso CIF	18 521.0	28 104.0	54 509.0	.	.	.	.	.	.	-	
Cyprus	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val	000 Cy. Pd.	12.0	19.0	7.0	14.0	13.0	7.0	18.0	23.0	14.0	18.0	35.0
France	Qty	000 mt	4.9	5.4	6.7	5.9	6.4	5.4	5.0	6.7	6.7	4.6	3.6
	Val	000 000 FF	118.3	161.4	211.1	207.1	244.8	233.6	243.5	299.6	380.1	326.5	283.0
Germany, FR b/	Qty	000 mt			4.0	5.0	5.0	5.0	7.0	8.0	8.0	10.0	8.0
	Val	000 DM											
Guatemala	Qty	000 mt			0.0	0.0		0.0	0.1	0.0	0.1		
	Val	dom cur											
Indonesia	Qty	000 mt	1.5	2.0	1.3	0.8	0.2	1.6	1.6	2.5	4.3	1.8	1.8
	Val	000 $US	4 542.0	7 538.0	5 209.0	2 806.0	1 101.0	6 260.0	6 311.0	12 043.0	23 040.0	7 528.0	7 166.0
Italy	Qty	000 mt	5.9	7.5	5.3	6.8	5.9	5.5	7.8	6.9	4.9	5.8	8.9
	Val	000 000 Lira	15 050.0	24 520.0	21 170.0	36 370.0	37 340.0	34 590.0	49 710.0	64 130.0	63 540.0	73 450.0	62 850.0
Japan	Qty	000 mt	1.2	2.9	1.1	0.3	1.9	1.3	1.7	1.6	0.5	0.4	0.4
	Val	000 000 Yen	1 965.0	5 328.0	2 432.0	1 123.0	3 124.0	2 335.0	4 135.0	5 465.0	2 578.0	2 171.0	3 786.0
Liberia	Qty	000 mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	Val	$US	1 824.0	8 579.0	19 483.0	1 250.0	10 257.0	18 040.0	786.0	4 982.0	7 165.0		
New Zealand	Qty	000 mt	252.0	218.0	187.0	181.0	402.0	236.0	206.0	255.0	147.0	105.0	217.0
	Val	000 dom cur	913.0	905.0	981.0	1 139.0	2 388.0	1 759.0	1 390.0	1 828.0	1 761.0	1 512.0	1 784.0
Philippines	Qty	000 mt	0.2	0.0	0.0		0.1	0.1	0.1	0.1	0.0	0.0	
	Val	000 $US CIF	626.0	12.0	12.0		453.0	453.0	537.0	742.0	300.0	360.0	
Rep. of Korea	Qty	000 mt	333.0	866.0	306.0	728.0	1 068.0	514.0	706.0	533.0	603.0	891.0	1 078.0
	Val	000 $US	1 571.0	2 390.0	2 026.0	4 120.0	3 346.0	3 611.0	6 614.0	5 148.0	5 675.0	6 634.0	7 724.0
Spain	Qty	000 mt	2.0	2.0	3.0	2.0	2.0	1.0	0.0	8.0	1.0	0.0	0.0
	Val	000 000 Pts.	479.0	661.0	634.0	625.0	761.0	569.0	522.0	958.0	556.0	734.0	1 166.0
Sweden	Qty	000 mt	5.0	6.0	7.0	5.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0
	Val	000 SEK	55 153.0	86 046.0	90 770.0	75 141.0	67 040.0	32 531.0	47 911.0	47 484.0	66 582.0	69 056.0	67 725.0
Switzerland	Qty	000 mt	1.7	2.3	1.9	1.2	1.7	1.3	1.4	1.5	1.2	1.0	1.0
	Val	000 SF	38 506.0	54 088.0	49 407.0	29 408.0	40 808.0	29 698.0	34 473.0	46 951.0	48 235.0	33 149.0	29 729.0
United Kingdom	Qty	000 mt	2.8	6.7	5.6	4.3	3.1	3.2	4.7	4.6	2.6	2.5	3.1
	Val	000 pounds	5 304.0	15 331.0	14 662.0	13 737.0	15 558.0	17 719.0	24 740.0	30 670.0	21 529.0	18 523.0	22 769.0
EEC	Qty	000 mt	8.1	12.9	12.5	9.8	7.4	6.0	7.8	7.4	6.3	7.3	12.0
	Val	000 ECU	29 907.0	56 096.0	59 497.0	62 239.0	55 621.0	57 636.0	67 152.0	90 470.0	98 563.0	87 837.0	74 621.0

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a/ The following respondents reported "0", "negligible", "-", or blank for the entire period: Burma, Cape Verde, Cuba, Finland, Greece, Morocco, and Portugal.

b/ Includes nickel silver.

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Table 3.2.11 Imports of cobalt ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Austria	Qty mt						10.0	11.0	11.0	11.0	12.0	-
	Val 000 000 dom						908.5	2 013.4	1 463.6	1 195.4	1 052.9	-
Brazil	Qty mt	-	-	-	-	-	-	4.0	4.0	5.0	9.0	6.0
	Val 000 $US CIF	-	-	-	-	-	-	566.0	271.0	295.0	365.0	200.0
China	Qty mt	3 400.0	4 000.0	6 000.0								
	Val 000 $US											
Finland	Qty mt					100.0	200.0	900.0	500.0	600.0	600.0	400.0
	Val 000 dom cur											
France	Qty mt	8.4		9.1		8.6	5.6	7.6	5.6	6.4	5.7	-
	Val 000 FF	15.0		22.8		38.2	120.0	178.0	120.0	109.0	78.0	-
Germany, FR	Qty mt									-	0.0	5.0
	Val 000 DM											
Italy	Qty mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Val 000 000 Lira	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0
Morocco	Qty mt			0.0								
	Val 000 Dinar			0.1								
Spain c/												
EEC	Qty mt	8 499.0	8 598.0	9 152.0	8 657.0	8 678.0	9 726.0	7 684.0	5 697.0	6 460.0	5 768.0	9.0
	Val 000 ECU	2 711.0	3 252.0	3 956.0	4 795.0	6 702.0	14 634.0	30 525.0	20 514.0	17 819.0	12 167.0	120.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Barbados, Burma, Canada, Cape Verde, Colombia, Cuba, Greece, Guatemala, Indonesia, Liberia, New Zealand, Philippines, Portugal, Republic of Korea, Switzerland, and the United Kingdom. The following respondents reported that data were not available: Cyprus, Japan and Sweden.

b/ Australia reported that no information was available for cobalt separately.

c/ Included in "other metal commodities not elsewhere specified".

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Table 3.2.12 Imports of cobalt and cobalt-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/													
Brazil	Qty	mt	-	-	202.0	255.0	211.0	288.0	218.0	221.0	157.0	168.0	182.0
	Val	000 $US CIF	-	-	1 417.0	2 523.0	2 710.0	4 990.0	13 041.0	12 468.0	7 677.0	3 991.0	8 045.0
China	Qty	mt							389.0			315.0	855.0
	Val	000 $US							20 360.0			7 660.0	10 430.0
Colombia	Qty	mt	0.0	0.0	41.0	94.0	583.0	116.0	107.0	52.0	75.0	118.0	
	Val	000 Peso CIF	0.0	0.0	9 101.0	17 801.0	33 877.0	45 420.0	42 358.0	15 019.0	23 607.0	65 512.0	
Finland	Qty	mt	983.0	816.0	808.0	905.0	1 005.0	971.0	1 003.0	919.0	1 461.0	1 264.0	1 339.0
	Val	000 dom cur											
France	Qty	mt	0.5		0.8		0.6	0.9	0.7	0.9	0.9	1.5	1.1
	Val	000 FF	16.4		23.0		39.0	192.0	165.0	192.0	275.0	206.0	112.0
Germany,FR c/	Qty	mt			1 445.0	1 838.0	1 993.0	1 962.0	1 753.0	1 620.0	908.0	1 193.0	1 779.0
	Val	000 DM											
Italy	Qty	000 mt	0.3	0.4	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.2
	Val	000 000 Lira	1 220.0	1 700.0	1 480.0	1 620.0	2 750.0	6 760.0	13 540.0	10 140.0	8 100.0	7 380.0	6 490.0
Japan	Qty	mt	4 490.0	3 661.0	1 532.0	3 148.0	1 313.0	745.0	985.0	949.0	497.0	1 284.0	1 360.0
	Val	000 000 Yen	7 937.0	7 974.0	4 326.0	8 496.0	4 212.0	2 860.0	10 346.0	8 459.0	4 393.0	5 354.0	7 127.0
Morocco	Qty	mt					0.1						
	Val	000 Dinar					1.1						
Rep. of Korea	Qty	mt	1.0	7.7	3.2	7.0	15.0	6.0	40.0	38.9	26.9	51.5	115.2
	Val	000 $US	17.1	65.9	71.6	43.6	92.0	143.0	2 255.0	2 190.0	1 163.0	1 283.0	1 548.0
Spain d/													
Sweden	Qty	mt	341.0	521.0	573.0	545.0	237.0	484.0	509.0	530.0	555.0	273.0	233.0
	Val	000 SEK	12 050.0	20 609.0	25 398.0	27 203.0	17 412.0	57 131.0	124 169.0	125 822.0	125 948.0	51 726.0	28 698.0
United Kingdom	Qty	mt	1 872.0	2 312.0	1 826.0	1 914.0	1 808.0	1 926.0	2 644.0	1 999.0	1 335.0	1 106.0	1 730.0
	Val	000 Pounds	4 737.0	7 150.0	6 833.0	10 231.0	12 123.0	18 555.0	63 293.0	46 806.0	26 183.0	11 956.0	14 018.0
EEC e/	Qty	mt	1 168.0	4 400.0	3 323.0	13 007.0	12 724.0	19 763.0	13 358.0	11 893.0	9 602.0	3 289.0	2 060.0
	Val	000 ECU	5 597.0	24 363.0	20 880.0	21 569.0	23 569.0	42 235.0	129 045.0	126 091.0	93 111.0	64 030.0	27 902.0

7/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Burma, Canada, Cape Verde, Cuba, Greece, Guatemala, Indonesia, Liberia, New Zealand, Philippines, Portugal,and Switzerland. The following respondent reported that data were not available: Cyprus.

b/ Australia reported that no information was available for cobalt separately.

c/ Up to 1980 includes cobalt matte as well as waste and scrap.

d/ Included in "other metal commodities not elsewhere specified".

e/ Figures for Belgium, except for quantity for the years 1976-81, not included because they are not available.

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Table 3.2.13 Imports of cobalt and cobalt-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Brazil	Qty mt	-	-	-	-	26.0	24.0	17.0	80.0	77.0	68.0	75.0
	Val 000 $US CIF	-	-	-	-	486.0	536.0	1 078.0	3 980.0	2 390.0	2 053.0	2 807.0
Colombia	Qty mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6 827.0	7 664.0	4 950.0	
	Val 000 000 Peso CIF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1 260.4	1 616.1	1 446.8	
France	Qty mt	0.0		0.1		0.0	0.2	0.1	0.2	0.2	0.1	0.1
	Val 000 FF	2.3		4.7		4.2	54.8	22.2	54.8	65.0	39.5	48.0
Germany, FR	Qty 000 mt			38.0	33.0	98.0	98.0	97.0	84.0	162.0	187.0	125.0
	Val 000 DM											
Italy	Qty 000 mt	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
	Val 000 000 Lira	640.0	820.0	660.0	1 110.0	1 260.0	1 650.0	3 230.0	3 050.0	2 850.0	2 210.0	3 660.0
Japan	Qty mt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.0	8.0	5.0	2.0	7.0
	Val 000 000 Yen	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	175.0	166.0	146.0	66.0	129.0
Morocco	Qty mt	0.0	0.0	0.0	0.1		0.1	0.1				
	Val 000 Dinar	0.4	0.4	0.3	1.0		12.1	19.3				
Rep. of Korea	Qty mt				2.9		28.0	30.0	17.3	27.0	36.3	66.5
	Val 000 $US				80.9		1 292.0	2 495.0	1 299.0	1 694.0	1 641.0	1 772.0
Spain c/												
United Kingdom	Qty mt	64.0	496.0	343.0	347.0	316.0	340.0	388.0	190.0	105.0	113.0	188.0
	Val 000 Pounds	249.0	1 453.0	1 785.0	2 556.0	2 407.0	5 046.0	10 288.0	4 864.0	2 707.0	1 843.0	2 080.0
EEC d/	Qty mt	66.0	572.0	362.0	471.0	428.0	422.0	427.0	397.0	397.0	280.0	297.0
	Val 000 ECU	977.0	3 316.0	3 938.0	5 333.0	4 441.0	7 303.0	13 668.0	15 877.0	18 555.0	11 465.0	7 090.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Burma, Canada, Cape Verde, China, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia, New Zealand, Philippines, Portugal and Switzerland. The following respondents reported that data were not available: Cyprus and Sweden.

b/ Australia reported that no information was available for cobalt separately.

c/ Included in "other metal commodities not elsewhere specified".

d/ Figures for Belgium, except for quantity for the years 1972-81, not included because they are not available.

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Table 3.2.14 Imports of manganese ores and concentrates, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty 000 mt	4.0	3.0	-	1.0	2.0	3.0	-	2.0	2.0	-	1.0
	Val 000 $A	177.0	214.0	32.0	117.0	338.0	376.0	28.0	677.0	439.0	163.0	484.0
Austria	Qty 000 mt						1.0	0.0	2.0	0.0	0.0	0.0
	Val 000 dom cur						1 702.0	1 336.0	1 826.0	1 820.0	1 898.0	1 294.0
Brazil	Qty 000 mt	9.0	12.0	17.0	18.0	8.0	13.0	11.0	28.0	15.0	11.0	18.0
	Val 000 $US CIF	979.0	1 630.0	1 945.0	2 020.0	1 181.0	1 951.0	1 965.0	4 658.0	3 339.0	2 738.0	3 578.0
Canada	Qty 000 mt	133.4	125.1	69.8	117.0	57.6	136.4	45.2	95.2	119.8	71.7	42.3
	Val 000 $Can	7 405.0	11 590.0	10 104.0	15 988.0	9 059.0	18 442.0	8 347.0	17 570.0	21 568.0	14 751.0	6 978.0
Colombia	Qty 000 mt	958.0	1 002.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
	Val 000 Peso CIF	1 532.0	5 395.0	0.0	0.0	0.0	0.0	0.0	-	-	-	
France	Qty 000 mt	1 432.0		1 157.0		922.0	1 225.0	1 274.0	1 225.0	880.0	921.0	745.0
	Val 000 FF	216.0		288.0		304.0	390.0	348.0	390.0	358.0	421.0	370.0
Germany, FR	Qty 000 mt			733.0	610.0	453.0	673.0	717.0	490.0	607.0	394.0	434.0
	Val 000 DM											
Indonesia	000	3.7	3.3	4.8	4.8	7.9	8.6	7.0	12.0	9.5	4.9	2.9
	Val 000 $US	706.0	722.0	1 110.0	1 399.0	1 953.0	2 017.0	1 949.0	3 245.0	2 503.0	1 796.0	1 177.0
Italy	Qty 000 mt	112.8	123.2	126.1	142.2	107.3	113.7	169.6	163.6	141.7	132.9	154.2
	Val 000 000 Lira	5 430.0	9 890.0	10 970.0	15 150.0	14 150.0	14 700.0	21 720.0	24 210.0	29 270.0	31 420.0	53 050.0
Japan	Qty 000 mt	555.0	472.2	542.8	1 802.3	1 237.1	1 059.8	1 616.4	1 846.5	1 532.9	1 513.2	1 030.6
	Val 000 000 Yen	4 326.8	5 727.9	7 720.0	34 232.2	22 351.7	14 263.6	21 749.9	31 533.6	25 372.3	27 001.0	16 093.6
Morocco	Qty 000 mt	0.0	0.2	0.4	0.2	0.5	0.4	0.5	0.9	0.3	0.1	0.3
	Val 000 Dinar	2.2	16.8	40.4	27.7	64.3	576.9	630.5	1 324.0	635.6	333.6	880.0
New Zealand	Qty 000 mt	86.0	331.0	271.0	12.0	48.0	14.0	104.0	440.0	299.0	383.0	511.0
	Val 000 dom cur	11.0	45.0	56.0	14.0	18.0	5.0	43.0	207.0	168.0	228.0	379.0
Philippines	Qty 000 mt	2.4	1.2	2.6	3.2	9.5	6.8	3.5	6.6	2.0	3.0	
	Val 000 $US CIF	304.0	181.0	379.0	533.0	1 262.0	1 195.0	937.0	1 886.0	666.0	1 077.0	
Portugal	Qty 000 mt	0.1	0.5	50.6	37.7	201.0	170.1	235.7	173.8	110.0	122.1	35.0
	Val 000 Escudos	0.2	1.0	70.1	64.1	463.6	452.5	647.5	584.7	456.3	604.8	196.6
Rep. of Korea	Qty 000 mt	12.0	21.0	17.0	43.0	25.0	50.0	90.0	80.0	11.0	91.0	74.0
	Val 000 $US	1 016.0	3 288.0	7 663.0		4 056.0	7 930.0	12 443.0	13 351.0	3 834.0	15 294.0	11 517.0
Spain	Qty 000 mt	331.0	384.0	437.0	410.0	433.0	370.0	487.0	453.0	254.0	261.0	214.0
	Val 000 000 Pts.	758.0	1 192.0	1 689.0	1 869.0	2 309.0	1 970.0	2 180.0	2 380.0	1 903.0	2 159.0	2 062.0
Sweden b/	Qty 000 mt	60.0	38.0	35.0	40.0	9.0	3.0	14.0	0.0	1.0	26.0	25.0
	Val 000 SEK	6 764.0	5 370.0	6 811.0	6 305.0	2 195.0	1 411.0	3 760.0	514.0	1 384.0	9 476.0	8 824.0
United Kingdom	Qty 000 mt	588.9	388.2	253.2	498.9	327.8	260.9	544.2	126.6	278.1	178.9	368.5
	Val 000 Pounds	8 067.0	9 144.0	7 802.0	18 290.0	12 984.0	9 188.0	15 788.0	4 443.0	8 403.0	6 416.0	12 199.0
EEC	Qty 000 mt	269.6	3 409.6	2 827.6	2 823.9	2 231.2	2 514.0	3 477.5	2 598.6	2 346.3	2 120.2	2 109.6
	Val 000 ECU	70 505.0	116 894.0	106 151.0	138 450.0	120 376.0	112 773.0	146 003.0	125 843.0	140 195.0	141 687.0	147 332.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Barbados, Burma, Cape Verde, China, Cuba, Cyprus, Finland, Greece, Guatemala, Liberia, and Switzerland.

b/ The figures are based on the SITC 283.7 for the years 1973-1975.

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Table 3.2.15 Imports of ferro-manganese, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia	Qty	000 mt	8.0	11.0	4.0	5.0	3.0	5.0	17.0	7.0	2.0	2.0	1.0
	Val	000 $A	1 425.0	2 775.0	1 880.0	2 162.0	1 671.0	2 847.0	8 197.0	4 432.0	2 512.0	1 212.0	951.0
Austria	Qty	000 mt	23.0	24.0	21.0	21.0	19.0	21.0	26.0	23.0	22.0	24.0	-
	Val	000 dom cur						822 119.0	171 581.0	155 325.0	151 739.0	174 565.0	-
Canada	Qty	000 mt	24.1	17.1	35.7	25.0	29.4	26.8	83.7	26.7	36.7	25.1	18.3
	Val	000 $Can	4 880.0	5 267.0	16 820.0	11 670.0	13 824.0	14 139.0	45 291.0	15 039.0	30 277.0	18 456.0	14 342.0
Colombia	Qty	000 mt	4 681.0	4 676.0	0.0	8 043.0	4 904.0	6 776.0	10 161.0	14 618.0	11 778.0	11 856.0	
	Val	000 PesoCIF	21 246.0	37 409.0	0.0	116 358.0	88 156.0	107 210.0	219 677.0	422 046.0	395 564.0	539 788.0	
Cyprus	Qty	000 mt	-	-	-		0.0	0.0	0.0	-	0.1	0.0	0.0
	Val	000 Cy. Pd.	-	-	-	-	2.0	9.0	10.0	-	21.0	17.0	9.0
France	Qty	000 mt	39.3		21.0		35.0	18.5	48.0	48.4	34.0	29.0	23.0
	Val	000 FF	42.0		41.0		61.0	96.0	84.0	95.9	70.0	68.0	50.0
Germany, FR	Qty	000 mt			157.0	174.0	159.0	160.0	152.0	137.0	103.0	97.0	98.0
	Val	000 DM											
Indonesia	Qty	000 mt	0.7	0.3	0.5	1.2	1.3	2.6	4.2	3.1	2.7	5.7	7.4
	Val	000 $US	201.0	144.0	157.0	429.0	564.0	944.0	2 037.0	1 475.0	1 397.0	2 623.0	4 229.0
Italy	Qty	000 mt	111.7	143.4	110.0	106.1	116.3	103.2	117.7	120.8	99.2	114.0	68.4
	Val	000 000 Lira	16 560.0	34 640.0	38 940.0	42 210.0	50 630.0	43 920.0	55 920.0	68 060.0	67 620.0	86 770.0	50 510.0
Japan	Qty	000 mt	22.1	16.2	1.9	1.9	5.8	17.0	18.8	2.7	6.5	12.0	15.8
	Val	000 000 Yen	976.7	1 045.2	190.3	160.3	414.7	989.1	1 425.5	242.8	585.8	1 046.4	1 075.9
Morocco	Qty	000 mt	0.2	0.2	0.2	0.0	0.3	0.2	0.2	0.2	0.2	0.2	0.2
	Val	000 Dinar	37.2	49.4	59.4	10.3	67.7	479.9	436.5	500.5	674.1	682.3	835.1
New Zealand	Qty	000 mt	2 375.0	2 041.0	3 096.0	993.0	2 335.0	1 681.0	1 617.0	1 570.0	585.0	957.0	1 185.0
	Val	000 dom cur	430.0	436.0	826.0	443.0	1 047.0	758.0	772.0	808.0	390.0	650.0	941.0
Philippines	Qty	000 mt	-	6.6	1.2	1.3	1.7	2.9	5.5	3.2	1.1	2.2	
	Val	000 $US CIF	-	2 438.0	648.0	520.0	745.0	1 072.0	2 430.0	1 634.0	681.0	1 146.0	
Rep. of Korea	Qty	000 mt			494.0		1 683.0	2 973.0	2 583.0	857.0		5 812.0	
	Val	000 $US			392.0		1 302.0	2 136.0	2 053.0	893.0		4 096.0	
Spain	Qty	000 mt	4.0	0.0	0.0	0.0	1.0	0.0	0.0	4.0	0.0	1.0	2.0
	Val	000 000 Pts.	43.0	13.0	17.0	11.0	16.0	11.0	8.0	138.0	28.0	73.0	98.0
Sweden	Qty	000 mt	53.0	50.0	54.0	50.0	25.0	37.0	42.0	33.0	33.0	29.0	29.0
	Val	000 SEK	40 987.0	65 830.0	108 538.0	81 024.0	37 864.0	55 941.0	60 523.0	68 626.0	68 917.0	68 211.0	73 085.0
United Kingdom	Qty	000 mt	79.7	124.4	95.9	118.3	86.1	83.7	80.8	52.0	56.4	58.0	98.9
	Val	000 Pounds	7 667.0	14 978.0	19 790.0	24 325.0	21 232.0	18 380.0	20 211.0	13 063.0	13 762.0	14 480.0	21 726.0
EEC	Qty	000 mt	175.3	324.1	293.1	353.2	225.8	205.9	280.3	265.5	221.3	231.5	216.6
	Val	000 ECU	29 211.0	71 295.0	94 949.0	110 191.0	72 344.0	64 265.0	92 184.0	92 809.0	83 337.0	94 724.0	84 049.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Barbados, Brazil, Burma, Cape Verde, China, Cuba, Finland, Greece, Guatemala, Liberia, Portugal, and Switzerland.

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Table 3.2.16 Imports of manganese and manganese-predominating alloys, unwrought, by country, 1973-1983

Country a/	Quantity/ Unit Value	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/												
Brazil c/	Qty 000 mt	0.0	2.4	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
	Val 000 $US CIF	393.0	1 015.0	1 325.0	89.0	93.0	6.0	19.0	2.0	4.0	2.0	-
Canada	Qty 000 mt	4.2	3.9	5.4	6.6	6.9	7.9	8.3	7.0	10.4	0.8	2.7
	Val 000 $Can	2 319.0	2 718.0	4 468.0	5 507.0	6 391.0	7 073.0	8 849.0	8 601.0	13 037.0	1 315.0	3 782.0
China	Qty 000 mt										0.1	
	Val 000 $US										60.0	
France	Qty 000 mt	0.7		0.9		1.0	1.4	3.4	1.4	0.9	1.0	1.3
	Val 000 FF	2.0		4.3		4.6	7.3	10.7	7.3	6.9	8.3	8.2
Germany, FR d/	Qty 000 mt			4.0	5.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
	Val 000 DM											
Italy	Qty 000 mt	2.3	2.5	1.8	1.6	1.0	1.0	1.6	1.3	1.6	1.6	1.8
	Val 000 000 Lira	880.0	1 210.0	1 070.0	1 300.0	870.0	920.0	1 570.0	1 520.0	1 990.0	2 550.0	3 290.0
Morocco	Qty 000 mt											
	Val 000 Dinar			4.0								
Spain e/												
Sweden	Qty 000 mt	3.0	3.0	4.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Val 000 SEK	8 347.0	11 113.0	17 033.0	11 084.0	5 779.0	4 390.0	5 090.0	7 881.0	5 064.0	11 335.0	13 883.0
United Kingdom	Qty 000 mt	2.8	4.4	4.3	4.3	3.7	2.6	3.0	3.2	1.8	2.6	3.3
	Val 000 Pounds	665.0	1 436.0	1 746.0	2 264.0	2 218.0	1 480.0	1 785.0	2 079.0	1 210.0	1 824.0	2 785.0
EEC	Qty 000 mt	4.5	8.8	11.5	12.0	10.7	9.7	14.1	11.7	9.3	11.3	4.3
	Val 000 ECU	2 193.0	5 936.0	7 696.0	10 004.0	9 643.0	8 065.0	11 359.0	11 893.0	11 067.0	14 972.0	5 821.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Barbados, Burma, Cape Verde, Colombia, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia, New Zealand, Philippines, Portugal, Republic of Korea, and Switzerland. The following respondents reported that data were not available: Cyprus and Japan.

b/ Australia reported that no information recorded separately.

c/ Includes manganese and manganese-predominating alloys, worked.

d/ Up to 1980 includes waste and scrap.

e/ Included in "other metal commodities not elsewhere specified".

/...

Table 3.2.17 Imports of manganese and manganese-predominating alloys, worked, by country, 1973-1983

Country a/	Quantity/ Value	Unit	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Australia b/													
Barbados	Qty	000 mt								0.0			
	Val	000 $BDS								5.0			
Canada	Qty	000 mt	9.7	0.6	5.7	12.1	4.8	15.9	21.9	20.9	12.7	2.9	0.5
	Val	000 $CAN	2 008.0	201.0	3 230.0	6 250.0	2 357.0	7 178.0	12 346.0	13 438.0	8 096.0	1 720.0	332.0
France	Qty	000 mt	0.0		0.0		0.1	0.0	0.0	0.1	0.1	0.1	0.2
	Val	000 FF											
Germany, FR	Qty	000 mt			0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
	Val	000 DM											
Italy	Qty	000 mt	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.2
	Val	000 000 Lira	60.0	130.0	40.0	120.0	80.0	140.0	310.0	170.0	240.0	200.0	300.0
Morocco	Qty	000 mt	0.0				0.1		0.0				
	Val	000 Dinar	0.0				0.1	0.1	0.2				
Spain c/													
United Kingdom	Qty	000 mt	1.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.1	0.1
	Val	000 Pounds	382.0	189.0	64.0	209.0	389.0	326.0	283.0	215.0	416.0	320.0	285.0
EEC	Qty	000 mt	0.1	0.3	0.1	0.1	0.4	0.2	0.2	0.2	0.3	0.1	0.9
	Val	000 ECU	285.0	976.0	361.0	733.0	784.0	1 030.0	1 100.0	1 292.0	1 086.0	1 083.0	2 604.0

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: Austria, Brazil, Burma, Cape Verde, China, Colombia, Cuba, Finland, Greece, Guatemala, Indonesia, Liberia, New Zealand, Philippines, Portugal, Republic of Korea, and Switzerland. The following respondents reported that data were not available: Cyprus, Japan and Sweden.

b/ Australia reported that no information was recorded separately.

c/ Included in "other metal commotities not elsewhere specified".

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Table 3.3 Botswana export of nickel-copper matte in tonnes, 1973-1983

Year	Matte Production	Contained metal			Export value of matte 000 dom cur a/
		Nickel	Copper	Cobalt	
1973	-	-	-	-	-
1974	6 663	2 577	2 752	-	7 857
1975	16 514	6 447	6 504	92	22 185
1976	32 506	12 581	12 473	198	51 586
1977	30 772	12 094	11 788	165	43 000
1978	39 517	16 049	14 615	261	51 315
1979	39 823	16 173	14 563	294	74 068
1980	40 099	15 442	15 553	226	83 258
1981	46 565	18 278	17 819	254	79 439
1982	45 685	17 756	18 375	254	61 172
1983	48 083	18 216	20 261	223	68 395

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a/ Export value is that of nickel-copper matte which includes cobalt.

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SECTION IV. PRESENT PRODUCTION CAPACITY, PLANS AND PROJECTIONS FOR FUTURE PRODUCTION

Table 4.1 Amount of metal content in metal-bearing ores and concentrates that could be mined if existing mines operated at full capacity

Country a/	Copper 000 mt			Nickel 000 mt			Cobalt mt			Manganese 000 mt		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Australia	265.0	260.0	260.0	97.0	98.0	98.0	3 700.0	3 700.0	3 700.0	1 100.0	1 100.0	1 100.0
Botswana	18.4	20.3	18.7	17.8	18.2	19.2	254.0	223.0	271.0	-	-	-
Brazil	19.0	32.0	33.0	13.0	18.0	18.0	-	-	-	890.0	740.0	752.0
Burma	0.0	0.0	b/	-	-	-	-	-	-	-	-	-
Canada	800.0	800.0	800.0	250.0	250.0	250.0	3.1	3.1	3.1	0.0	0.0	0.0
Cuba				44.5	44.5	44.5	2 000.0	2 000.0	2 000.0			
Cyprus	0.9	1.2	1.5	-	-	-	-	-	-	-	-	-
Finland	34.8	35.0	30.5	5.8	4.9	5.6	930.0	932.0	845.0			
France c/												
Germany FR d/												
Greece					17.5	17.5	17.5			9.9	9.9	9.9
Indonesia	78.8	78.8	78.8	60.0	60.0	60.0	-	-	-	8.0	8.0	8.0
Italy	0.1	1.6	2.0							2.6	2.2	2.5
Mexico e/ f/ g/	127.0	160.0	160.0							231.0	231.0	231.0
Morocco	22.0	24.0	24.0				760.0			81.0	62.0	52.0
Philippines h/	292.0	271.0	464.0	20.0	14.0	45.0	466.0	165.0	n.a.	1.6	2.2	n.a.
Portugal	4.0	4.0	4.0	-	-	-	-	-	-	-	-	-
Rep. of Korea	0.5	0.6	0.7									
Spain	70.0	70.0	73.0	-	-	-	-	-	-	-	-	-
United Kingdom	0.7	0.7	0.7	-	-	-	-	-	-	-	-	-

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Table 4.2 Amount of metal content in known reserves that are planned to be worked by existing mining operations

Country a/	Copper 000 000 mt	Nickel 000 000 mt	Cobalt 000 mt	Manganese 000 000 mt
Australia	5.8	1.9	41.7	114.0
Botswana	275.0 b/	288.9	3.8	-
Burma	0.8	-	-	-
Canada c/	17.0	7.7	d/	0.0
Cuba		1.8	120.0	
Cyprus	0.1	-	-	-
Greece		1 040.0		0.1
Guatemala	750.0	1 800.0	18.0	
Indonesia	0.9	7.3		
Italy	0.0 e/			0.0 e/
Japan	0.3 f/	-	-	0.1 g/
Mexico h/	16.3			159.0
Morocco	0.2			0.1
New Zealand	i/	0.0	0.0	j/
Portugal	1.3 k/		18.1 l/	
Rep. of Korea	0.2			0.2
Spain	2.0	-	-	-
Sweden	2.5	-	-	-
United Kingdom	0.0 m/	-	-	-

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a/ The following respondents reported either "0", negligible, "-" or blank for the entire period: for all four metals - Austria, Brazil, Cape Verde, China, Colombia, Finland, Germany, Federal Republic of, and Switzerland; for copper - Cuba, France and Greece; for nickel - Burma, Cyprus, Italy, Japan, Morocco, New Zealand, Portugal, Republic of Korea, Spain, Sweden and the United Kingdom; for cobalt - Burma, Cyprus, France, Greece, Indonesia, Italy, Japan, Morocco, New Zealand, Republic of Korea, Spain, Sweden and United Kingdom; for manganese - Botswana, Burma, Cuba, Cyprus, France, Guatemala, Indonesia, Portugal, Spain, Sweden and United Kingdom. The following respondents reported that data were not available: for all four metals - Phillipines; for nickel - France.

b/ Reserves to the year 2000.

c/ Measured and indicated reserves for metal contained in mineable ores in 1983.

d/ Co-product of copper and nickel.

e/ Italy reported copper reserves of 0.004 million mt and manganese reserves of 0.02 million mt; rounding to one decimal place shows these as 0.0.

f/ As of April 1982.

g/ As of April 1983.

h/ Mexico reported that no deposits of nickel or cobalt have yet been located.

i/ Still being prospected.

j/ Very small.

k/ Proved and indicated reserves.

l/ Proved reserves.

m/ United Kingdom reported measured and indicated reserves of 0.002 million mt; rounding to one decimal place shows these as 0.0.

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Table 4.3 Production capacity of new mines under development or planned to be developed in the future, in terms of amount of metal content in metal-bearing ores and concentreates

Country a/	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Copper (Thousands of metric tons)											
Australia					12.0	50.0	70.0	90.0	110.0	130.0	150.0
Brazil	-	-	36.0	36.0	36.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Burma	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Canada b/	0.0	18.0	27.0								
Morocco	24.0										
New Zealand c/											
Portugal	-	-	-	70.0	70.0	70.0	80.0	80.0	80.0	80.0	80.0
United Kingdom	-	-	0.8	0.8	0.8						
Nickel (Thousands of metric tons)											
Brazil	-	51.0	55.0	55.0	55.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cuba		5.0	20.0	30.0	30.0	30.0	35.0	45.0	60.0	60.0	60.0
Greece		7.3	10.0	11.0	12.3						
Cobalt (metric tons)											
Cuba		300.0	1 300.0	2 000.0	2 000.0	2 000.0	2 300.0	3 000.0	4 000.0	4 000.0	4 000.0
Manganese (Thousands of metric tons)											
Brazil	-	-	370.0	370.0	370.0	n.a	n.a.	n.a.	n.a.	n.a.	n.a.
Morocco	52.0										
New Zealand d/											

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a/ The following respondents reported either "0", "negligible", "-" or blank for the whole period: for all four metals - Austria, Botswana, Cyprus, Guatemala, Indonesia, Italy, Mexico, Republic of Korea, Spain and Switzerland; for copper - Cuba, Greece, and Indonies; for nickel - Australia, Burma, Canada, Japan, Morocco, New Zealand, Portugal, Sweden and United Kingdom; for cobalt - Australia, Brazil, Burma, Canada, Greece, Japan, Morocco, New Zealand, Portugal, Sweden and United Kingdom; for manganese - Australia, Burma, Canada, Cuba, Greece, Portugal, Sweden and United Kingdom. The following respondents reported that data are are not available: for all four metals - France and Philippines; for copper - Japan and Sweden; for manganese - Japan.

b/ Canada mentioned that future developments beyond 1986 depend upon market forces and decisions are taken by private corporations. Thus, more detail would be misleading due to uncertainty.

c/ New Zealand reported that this is still being prospeted.

d/ New Zealand reported that the figure is less that one thousand mt.

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Table 4.4 Amount of metal content in total known reserves

Country a/	Copper 000 000 mt	Nickel 000 000 mt	Cobalt 000 mt	Manganese 000 000 mt
Australia	5.8	1.9	41.7	114.0
Brazil	6.1	4.2	2.0	19.6
Burma	0.8	-	-	-
Cuba		20.0	1 500.0	
France		15.0		
Greece	1.4	0.2		
Guatemala	0.9	4.0	0.0 b/	0.1
Indonesia	0.9	7.3	-	-
Italy	0.1			0.1
Japan	0.5 c/	-	-	0.4 d/
Mexico	16.3			159.0
Morocco	0.2			0.1
New Zealand	e/			e/
Philippines f/	4 303.8 g/	1 594.1 h/	-	1.4 i/
Portugal	3.5 j/	18.1 k/		
Rep. of Korea	0.2			0.2
Spain	2.0	-	-	-
Sweden	2.5	-	-	-
United Kingdom	0.0 l/			

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a/ The following respondents reported either "0", "negligible" "-" or blank: for all four metals - Austria, Botswana, Canada, Cyprus and Switzerland; for copper - Cuba and Greece; for nickel - Burma, Italy, Japan, Mexico, Morocco, New Zealand, Portugal, Republic of Korea, Spain, Sweden and United Kingdom; for cobalt - Burma, Indonesia, Italy, Japan, Mexico, Morocco, New Zealand, Philippines, Republic of Korea, Spain, Sweden, and United Kingdom; for manganese - Burma, Cuba, Greece, Indonesia, Portugal, Spain, Sweden and United Kingdom. The following respondents reported that data are not available: for copper - France; for cobalt - France; for manganese - France.

b/ Guatemala reported cobalt reserves of 40 thousand mt; the figure is shown as 0.0 due to rounding.

c/ As of April 1982.

d/ As of April 1983.

e/ Unknown.

f/ Total positive and probable ore reserves.

g/ 0.44% copper content.

h/ 1.14% nickel content.

i/ 40.61% manganese content.

j/ Demonstrated reserves = proved - indicated reserves.

k/ Proved reserves.

l/ United Kingdom reported copper reserves of 0.005 million mt. which includes 0.003 million mt. of 'estimated' reserves; the figure is shown as 0.0 due to rounding.

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Table 4.5 Projected future production, in terms of amount of metal content in metal-bearing ores and concentrates

Country a/	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Copper (Thousands of metric tons)											
Australia	245.6	230.0	225.0	220.0	230.0	270.0	290.0	310.0	330.0	350.0	370.0
Brazil	33.0	45.0	90.0	90.0	90.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	620.0	623.0	618.0	618.0	621.0	643.0	658.0	668.0	658.0	668.0	679.0
Cuba	2.0	2.5					6.0				15.0
Indonesia	62.3	64.1	62.7	59.5	59.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	2.0	2.0	b/	b/	b/	b/	b/	b/	b/	b/	b/
Mexico c/	128.0	120.0	168.0	208.0	1 256.0						
Morocco	24.0	24.0	24.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
New Zealand d/											
Philippines	316.7	359.7	400.7	425.0	470.3						
Portugal	3.0	3.0	3.0	55.0	65.0	72.5	80.0	80.0	80.0	80.0	80.0
Rep. of Korea	0.7		1.1					2.7			
Spain	58.0	60.0	61.0	65.0	65.0	67.0	68.0	n.a.	n.a.	n.a.	n.a.
United Kingdom	0.7	0.7	1.5	1.5	1.5	0.7	0.7				
Nickel (Thousands of metric tons)											
Australia	79.0	82.0	84.0	88.0	89.0	91.0	94.0	95.0	95.0	95.0	95.0
Brazil	13.0	69.0	69.0	69.0	69.0	n.a	n.a.	n.a.	n.a.	n.a.	n.a..
Canada	170.0	174.0	177.0	184.0	186.0	189.9	190.0	191.0	192.0	192.0	193.0
Cuba	44.5	49.5	66.5	77.5	77.5	77.5	82.5	92.5	113.0	115.0	120.0
Greece	17.5	24.0	27.5	28.6	30.8						
Indonesia	53.1	53.1	53.1	78.1	78.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Philippines	19.8	23.7	30.8	37.0	38.8						
Cobalt (metric tons)											
Australia	2 700.0	2 800.0	2 800.0	2 800.0	2 800.0	2 900.0	2 900.0	2 900.0	2 900.0	2 900.0	2 900.0
Canada	2.0	2.0	2.0	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3
Cuba	2 000.0	2 300.0	3 400.0	4 200.0	4 200.0	4 200.0	4 500.0	5 200.0	6 500.0	6 700.0	7 000.0
Philippines	555.0	583.0	612.0	642.0	674.0						
Portugal e/				100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manganese (Thousands of metric tons)											
Australia	720.0	816.0	840.0	865.0	890.0	920.0	945.0	975.0	1 000.0	1 030.0	1 060.0
Brazil	740.0	752.0	1 130.0	1 146.0	1 146.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indonesia	8.0	8.0	8.0	8.0	8.0	n.a	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	b/	b/	b/
Mexico c/ f/	180.0	180.0	180.0	180.0	180.0						
Morocco	52.0	50.0	50.0	50.0							
New Zealand d/											
Philippines	1.2	1.0	0.8	0.7	0.6						

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a/ The following respondents reported either "0", "negligible", "-", or blank for the whole period: for all four metals - Austria, Botswana, Burma, Cyprus, Guatemala, Switzerland; for copper - Greece; for nickel - Italy, Japan, Mexico, Morocco, New Zealand, Portugal, Republic of Korea, Spain, Sweden, and United Kingdom; for cobalt - Brazil, Greece, Indonesia, Italy, Japan, Mexico, Morocco, New Zealand, Republic of Korea, Spain, Sweden and United Kingdom; for Manganese - Canada, Cuba, Greece, Portugal, Republic of Korea, Spain, Sweden and United Kingdom. The following respondents reported that data are not available: for all four metals - France; for copper - Japan and Sweden.

b/ Cannot be estimated at this time.

c/ Figures are based on 80% of installed capacity.

d/ New Zealand reported that this is unknown at this time.

e/ Indicative figure.

f/ Including final products, nodules and battery grade.

LOS/PCN/SCN.1/WP.2 /Add.4
6 August 1985

ORIGINAL: ENGLISH

PREPARATORY COMMISSION FOR THE
INTERNATIONAL SEA-BED AUTHORITY
AND FOR THE INTERNATIONAL TRIBUNAL
FOR THE LAW OF THE SEA
Special Commission 1

BASIC DATA AND INFORMATION OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

Recycling of copper, nickel, cobalt and manganese

Background paper by the Secretariat

1. At the conclusion of the Third Session of the Preparatory Commission for the International Sea-Bed Authority and for the International Tribunal for the Law of the Sea, Special Commission 1 requested the Secretariat to collect and disseminate data on recycling of copper, nickel, cobalt and manganese. The present paper is intended to respond to that request; however, due to lack of available data on recycling of cobalt and manganese and scarcity of data on recycling of nickel, the paper deals, primarily, with recycling of copper.

Recycling activities

2. Before the relevant data are presented, an understanding of recycling activities will be useful. Recycling is the process which converts waste and scrap into economically useful products. In mineral industries, waste and scrap can be generated in each stage of economic activity with regard to mineral commodities - mining (extraction of ores), beneficiation (milling, washing, concentration or upgrading of ores), smelting, refining (including foundry), fabricating and manufacturing, and consumption of final goods and services. Figure 1 gives an idea about the waste and scrap generated in each stage.

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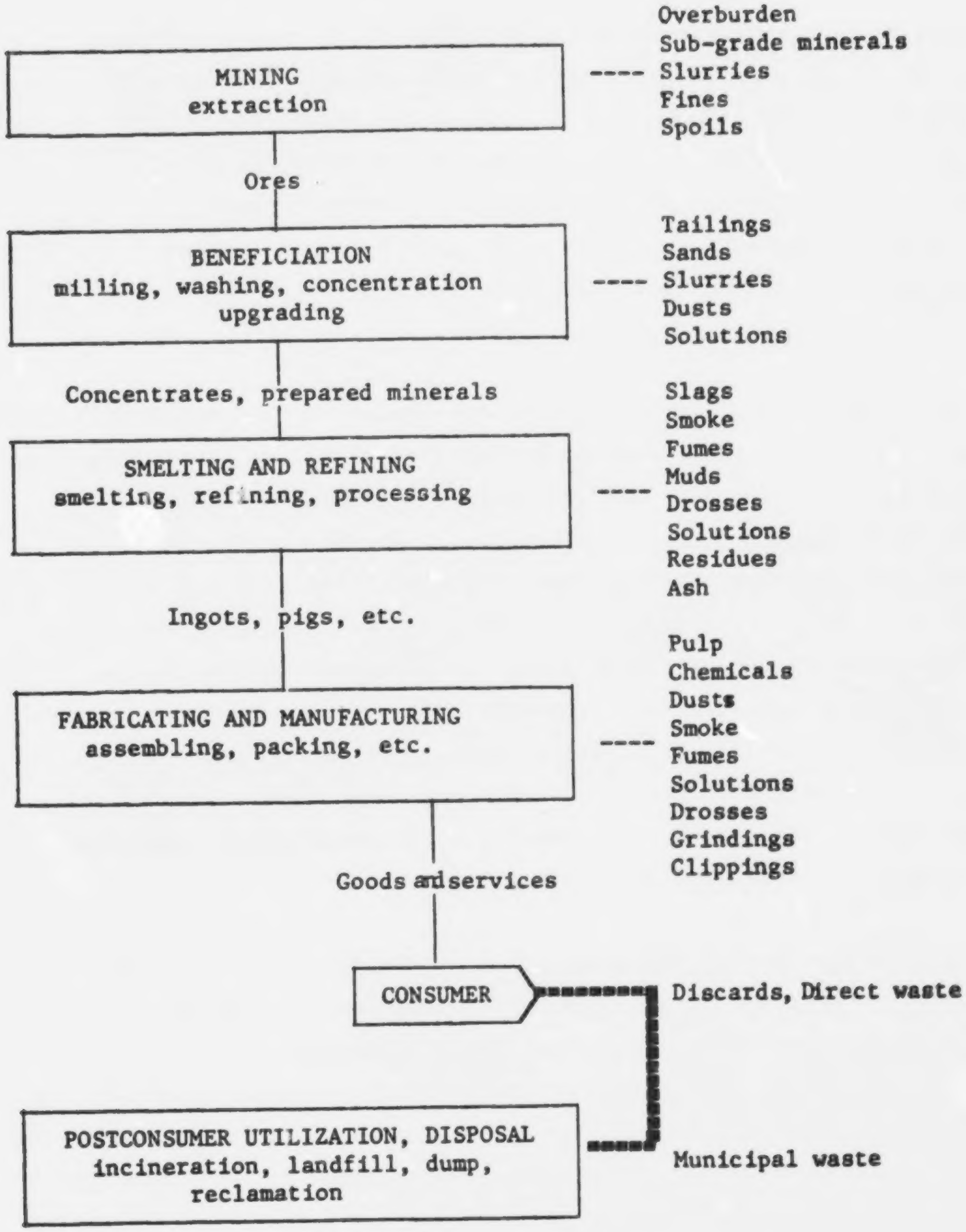
MINING
extraction
Overburden
Sub-grade minerals
Slurries
Fines
Spoils
Ores
BENEFICIATION
milling, washing, concentration
upgrading
Tailings
Sands
Slurries
Dusts
Solutions
Concentrates, prepared minerals
SMELTING AND REFINING
smelting, refining, processing
Slags
Smoke
Fumes
Muds
Drosses
Solutions
Residues
Ash
Ingots, pigs, etc.
FABRICATING AND MANUFACTURING
assembling, packing, etc.
Pulp
Chemicals
Dusts
Smoke
Fumes
Solutions
Drosses
Grindings
Clippings
Goods and services
CONSUMER
Discards, Direct waste
POSTCONSUMER UTILIZATION, DISPOSAL
incineration, landfill, dump,
reclamation
Municipal waste

Figure 1. Waste and scrap generated in various stages of economic activities with regard to mineral commodities

(Source: Adapted from Carl Rampacek, 'An overview of mining and and mineral processing waste as a resource, Resources and Conservation, v.9, no.1 (1982), p.77)

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3. Metals are recyclable to the extent that first, waste and scrap can be retrieved, and then retrievable waste and scrap can be made amenable for recovery of metals. To illustrate the former point, dissipation of the metal may occur during the life of the final product. Significant cobalt recycling is prevented because of dissipation in some end uses, such as chemicals, salts, driers and magnets. Similarly, less than 10 per cent of total copper consumption that goes into chemical end-products are not retrievable.

4. There is an important distinction made between waste and scrap generated during the extraction and beneficiation processes and those generated at other stages. Ores and concentrates may be produced from the waste and scrap generated in the two former stages, for economic, and sometimes extra-economic reasons; these will still be considered as parts of primary production. Furthermore, some waste and scrap generated during the smelting, refining, and fabricating and manufacturing processes are re-used within the same corporate entity; these are called 'home' scrap, and producers and users of home scrap are the same. Home scrap does not pass through commercial transactions and very rarely, any distinction is made between production from 'virgin' materials and from home scrap.

5. Besides home scrap, two other types of scrap[1/] are classified based on their source: 'prompt industrial' scrap or 'new' scrap, and 'old' scrap. Prompt industrial scrap is also generated during the smelting, refining, or fabricating and manufacturing processes, but it passes through commercial transactions. Old scrap comes from final products whose economic service life has terminated. Prompt industrial scrap and old scrap are traded within a country or internationally; therefore, they are referred to as 'purchased' scrap.

6. The secondary metal industry deals in prompt industrial scrap and old scrap. The secondary metal industry may be divided into two operational categories: wholesale scrap merchants and secondary metal producers. The former include collectors, dealers, brokers and sorters. The latter include secondary smelters and refiners who use

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scrap to produce secondary metals. As mentioned before, primary smelters, refiners,and fabricators and manufacturers are the major suppliers of prompt industrial scrap. Public and private utilities and waste disposal agencies, metallurgical and chemical industries, dismantlers and households are major suppliers of home scrap. Wholesale scrap merchants in the secondary industries collect scrap from the suppliers, sort them and prepare them to sell to the consumers. The consumers of scrap are secondary smelters and refiners including ingot makers and foundries; primary smelters and refiners also purchase scrap directly from the wholesale scrap merchants. Prompt industrial scrap is sometimes traded directly among the smelters, refiners,and fabricators and manufacturers. Considerable amount of scrap is also exported.

7. Collection of scrap is the first key stage in the recycling activities. While prompt industrial scrap is relatively easy to collect, home scrap poses great difficulties. Home scrap may be of low quality, may be available in small lot sizes, may have miscellaneous composition, and may have to be collected from great distance. Technological development such as the automobile shredder and the waste compactor facilitates considerably in the collection of scrap.

8. Proper identification, sorting and preparation of scrap is the next important stage in the recycling activities. Here again, technological development such as mechanical handling, and physical and chemical grouping processes is very helpful; identification and sorting, however, still require human judgement and remain labour-intensive. Preparation of scrap for it to be sold to consumers may include cleaning, cutting, bailing and bundling. Because of the variety in the composition and quality of scrap, trading in scrap is rather complex and often involves negotiation between suppliers, dealers and consumers. In order to facilitate trading, certain definitions and specifications are in use.[2/] It should be noted that the same lot of scrap may contain various metals; depending on the

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grade, scrap may be processed to obtain some of these metals. Sometimes, a distinction is made among scrap according to the main metal contained in scrap. For example, secondary copper may be obtained from copper-base, aluminium-base, nickel-base, zinc-base or tin-base scrap. Similarly, nickel can be obtained from nickel-base, copper-base or aluminium-base scrap.

9. The consumers of scrap - primary and secondary smelters and refiners - process scrap to produce output which can be used in end-products. Secondary smelters and refiners rely solely on scrap as input. Their operations include upgrading scrap and processing scrap to obtain usable products. Primary smelters, also, carry out similar operations. Primary refiners including ingot makers and foundries, however, have only re-melting facilities. They, therefore, tend to prefer high grade and clean scrap, particularly prompt industrial scrap, whose chemical composition is known. Figure 2 shows the structure of the primary and secondary industry with regard to the flow of scrap.

10. Secondary production, i.e. production from scrap consists of products which are, basically, of three forms: refined metal, alloy ingot and chemical compound. For example, as alloy ingot, secondary copper may be in the form of brass and bronze, iron and steel alloys, aluminium alloys and other alloys. Similarly, secondary nickel may be in the form of nickel-base alloys, copper-base alloys, aluminium-base alloys, and ferrous and high-temperature alloys.

Factors determining level of recycling activities

11. Since prompt industrial scrap is generated in the smelting, refining,and fabricating and manufacturing processes, the higher the level of activities in these processes, the more prompt industrial scrap is expected to be generated. The level of these activities depend on the demand for end-products which is, in turn, dependent on general economic situation. The technology used in these processes also influences how much scrap is generated. Technology may be efficient enough to generate only minimal amount of scrap.

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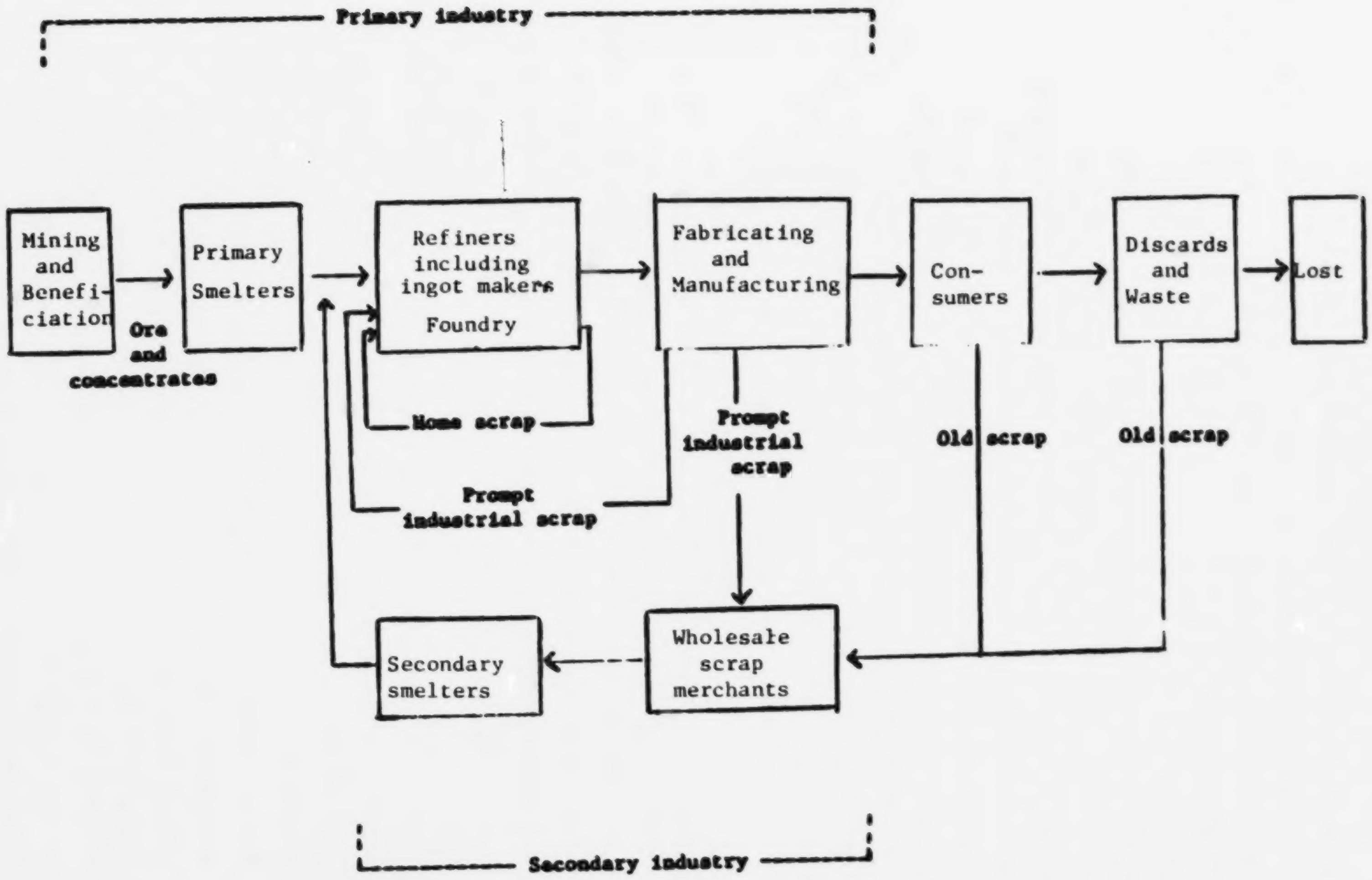
Primary industry
Mining and Beneficiation
Ore and concentrates
Primary Smelters
Refiners including ingot makers Foundry
Fabricating and Manufacturing
Con-sumers
Discards and Waste
Lost
Home scrap
Prompt industrial scrap
Prompt industrial scrap
Old scrap
Old scrap
Wholesale scrap merchants
Secondary smelters
Secondary industry

Figure 2. The structure of the mineral industry with regard to the flow of scrap.

(Source: United Nations Economic and Social Council, Committee on Natural Resources, Report of the Secretary-General, Document E/C.7/101 of 11 April 1979, p.5).

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12. Old scrap is generated when the economic service life of an end-product containing the relevant metals is terminated. Economic service life of metal-containing end-products vary markedly. One study has estimated the weighted average of the economic service life of copper-containing end-products to be about 17 years.[3/] This means that the availability of copper scrap in year 't' is dependent, on the average, on the amount of copper-containing end-products purchased in year t-17. However, the varied age distribution of end-products needs to be taken into account in order to estimate the availability of old scrap in a particular year. Similar studies on nickel-, cobalt-, and manganese-containing end-products are not available. It should be noted that the rate of dissipation of the metal concerned during the service life of the metal-containing end-product is also an important factor. This has been mentioned earlier. There are no systematic studies on the rate of dissipation of copper, nickel, cobalt and manganese during the service life of the end-products containing these metals. Another important factor is the nature of the end-products, which has bearing on the possible recovery of metals that are found in relatively pure form and in sizeable amounts in old scrap and consequently, are easier and less costly to recover than small quantities of impure metals.

13. Technology of collection, transportation, sorting and preparation of scrap is an important determining factor for the level of recycling activities. Technology of processing scrap to obtain usable products is of great importance. For example, technology is in use to convert specialty steel mill waste containing nickel - flue dust, mill scale and swarf (oily grindings) - to a useful nickel-base re-melt alloy for the stainless, alloy and specialty steel industries. Existing technology also allows to recycle spent nickel-containing catalysts from the production of edible fats and oils by thermal decomposition. On the other hand, the refractory nature of most high-nickel alloys makes processing them to yield separate elements technically difficult.

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14. The cost of waste disposal affects indirectly the level of recycling of old scrap or low-grade industrial waste. The relative cost of waste disposal as compared to the cost of recovery from waste can either favour or hinder recycling. The relative cost, in turn, depends on public policy regarding waste management and environmental protection. Private and public attitude and policy regarding resource conservation also affects the level of recycling activities. Private and public efforts regarding energy conservation also has relevance for the level of recycling activities. In general the energy required for the metallurgical processing of secondary metals is lower than that required for primary production. This is because scrap, in comparison with ore, is more concentrated in metal content and is already in the metallic stage. The energy consumed in the smelting and refining stages is much less than in the case of ore. One study shows the possibility of saving energy by means of secondary production, by estimating energy requirements based on various kinds of scrap, process and secondary product for nine metals.4/ One of the findings of the study is that a saving of roughly 85 per cent can be attained when copper wire bars are produced from no.2 copper scrap, utilizing an anode furnace and electric refining, instead of from ores.

Data on recycling

15. World-wide data on recycling of nickel, cobalt and manganese are either very difficult to obtain or not available. Even in the case of copper, the availability of data varies from country to country. The available data on secondary production and on international trade in waste and scrap are presented in the tables at the end of the paper. The Special Commission may wish to explore possibilities of improving the situation with regard to data availability.

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16. According to the Report of the Secretary-General to the Committee on Natural Resources referred to in connexion with Figure 2 above, among recycled non-ferrous metals, copper is first in terms of the largest amount of recovered metal and the highest proportion of recycled to total consumption - about 40 to 50 per cent.[5/] According to the United States Bureau of Mines, nickel scrap is a significant source of nickel supply, accounting for about 25 per cent of U.S. consumption.[6/] With regard to cobalt, the United States Bureau of Mines states that purchased scrap account for about 8 per cent of U.S. demand for cobalt.[7/] Processing of metal scrap specifically for recovery of manganese is insignificant. However, manganese is recycled within the integrated steelmaking operations to be re-used in the various points of those operations themselves. Interestingly, when all the various flows of manganese into and out of typical integrated steelmaking operations are taken into account, the amount of manganese in the crude steel product (ingot) tends to be about the same as the amount of manganese added in ferroalloy form, regardless of the other points at which manganese enters and leaves the steelmaking system.[8/]

17. Because of their high quality and known composition, virtually all home scrap and prompt industrial scrap are recycled. According to one study, only 5 per cent of home scrap and prompt industrial scrap of copper in the United Kingdom is unrecovered, mainly because of losses generated during pyrometallurgical processes and electrolytic refining.[9/] It should be noted that recycling of home scrap and prompt industrial scrap cannot be regarded as a net addition to supply, because they are generated from the original ore supply and have not been consumed in end-use. In these cases, the metal merely takes longer to meet final demand; however, stocks of home scrap and prompt industrial scrap can be managed in such a way as to correspond to consumption requirements. Old scrap, on the other hand, can add to the supply of metal. There are very few studies about the amount of old scrap that may be available in a particular country in a given year. What is known is that a comparatively low proportion of potentially available old scrap is actually recycled. For example, about 60 per cent of potentially available old scrap has been estimated to be recycled in the United Kingdom; similarly, about 42 per cent of potentially available old scrap has been estimated to be recycled in the United States.[10/]

General notes on the tables

18. The statistical tables present data pertaining to secondary production and international trade in scrap. Each of the tables 1, 2 and 3 presents statistics on secondary production of copper collected from different sources - United Nations Statistical Office, Metallgesellschaft, and World Bureau of Metal Statistics. The data vary from source to source and these three tables illustrate the fact that with regard to secondary production, coverage, classification and statistical reporting procedure may vary from source to source.

19. The designations employed and the presentation of the material in this paper do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitation of its frontiers or boundaries.

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Notes:

1/ It is very difficult to distinguish between waste and scrap in commodity classification, and usually, in statistical reporting, waste and scrap are considered as a single item. In this paper, the term 'scrap' is used as synonymous for waste and scrap.

2/ For example, the National Association of Recycling Industries (NARI) of the United States specifies copper scrap as copper wire, no.2 copper wire, no.1 heavy copper, no.2 copper and light copper. It also has specifications for brass and bronze scrap which has copper content. For nickel, the specifications are new nickel scrap, old nickel scrap, miscellaneous types of nickel scrap. Specifications with regard to nickel silver, cupro-nickel and monel may also have relevance for nickel scrap. The above specifications are fairly well spelt out. For example, the specification for no.2 copper which is a widely traded scrap reads: "Shall consist of miscellaneous unalloyed copper scrap having a nominal 96% copper content (minimum 94%) as determined by electrolytic assay. Should be free of the following: excessively leaded, tinned, soldered copper scrap, brasses and bronzes, excessive oil content, iron and non-metallics, copper tubing with other than copper connections or with sediment copper wire from burning,containing insulation, hair wire, burnt wire which is brittle and should be reasonably free of ash. Hydraulically briquetted copper subject to agreement". For details, see American Metal Market, *Metal Statistics 1984*, Fairchild Publications, New York, 1984,p.250-252.

3/ Elizabeth S. Bonczar and John E. Tilton, *An Economic Analysis of the Determinants of Metal Recycling in the United States: A Case Study of Secondary Copper*, Pennsylvania State University, University Park, PA, 1975, p.44.

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[4] Charles L. Kusik and Charles B. Kenahan, Energy Use Patterns for Metal Recycling, United States Bureau of Mines, Washington, D.C., 1978.

[5] ECOSOC, Committee on Natural Resources, Report of the Secretary-General, Document E/C.7/101 of 11 April 1979, p.10.

[6] Bureau of Mines, United States Department of the Interior, Mineral Commodity Profiles 1983: Nickel, 1983, p.10

[7] Bureau of Mines, United States Department of the Interior, Mineral Commodity Profiles 1983: Cobalt, 1983, p.9

[8] Bureau of Mines, United States Department of the Interior, Mineral Commodity Profiles 1983: Manganese, 1983, p.13

[9] L. Whalley and V.E. Brodie, 'UK metal reclamation: prospects for improvement', Resources Policy, December 1977.

[10] L. Whalley and V.E. Bradie, op.cit. and United States Bureau of Mines, Barriers to the Use of Secondary Metals, 1977.

Table 1. Production of secondary copper*

(thousand metric tons)

Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
United States....	422.0	450.8	312.5	340.3	349.6	420.1	498.5	515.1	493.6	467.5
Germany,Fed.Rep..	206.7	203.5	154.7	157.5	157.0	144.9	202.6	186.4	180.0	183.7
United Kingdom...	95.0	91.0	76.0	85.7	77.8	79.4	73.2	93.0	76.3	71.0
Other Europe.[1]...	27.3	35.5	35.4	36.9	74.5	128.9	56.3	44.5	56.9	68.9
Japan............	80.5	78.3	42.4	58.1	48.8	49.8	86.0	75.8	65.2	66.5
Brazil...........	...	51.0	46.0	39.3	45.8	45.0	53.1	63.0	45.0	50.0
Yugoslavia.......	3.8	10.3	14.0	14.9	50.5	103.9	38.3	39.5	41.9	42.9
Australia[2]......	13.7	11.7	14.1	12.8	25.7	17.7	17.7	21.3	26.2	28.6
Spain............	23.5	25.2	21.4	22.0	24.0	25.0[3]	18.0[3]	5.0[3]	15.0[3]	26.0[3]
China[4].[5].......	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Austria..........	22.5	23.4	24.3	28.1	18.7	15.9	15.2	27.9	22.1	23.7
Italy............	12.2	13.7	13.2	26.8	20.0	17.5	15.6	12.2	23.7	19.6
Sweden...........	11.6	12.4	6.8	7.3	14.0	11.9	15.2	12.5	11.7	17.0[4]
Canada...........	28.9	26.5	27.8	25.2	32.4	28.5	32.1	30.0	29.0	15.0
Hungary..........	7.3	8.4	9.7	10.6	11.9	13.1	12.0	12.1	12.8	10.1
Norway...........	6.3	8.3	5.7	6.2	5.2	5.6	6.4	6.5	0.0[5]	0.0[5]
France...........	0.6	0.6	0.6	0.8	0.6	0.6	0.6	0.6	0.4	...
Denmark..........	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total............	1 004.5[6]	1 040.2	794.1	860.7	907.3	1 003.8	1 109.4	1 126.2	1 068.0	1 047.1

Source: United Nations, Department of International Economic and Social Affairs, Statistical Office, Industrial Statistical Yearbook 1982, UN, New York, 1985, P.584.

*The table is arranged according to the ranking of countries on the basis of 1982 production.

Notes:

[1] Europe excluding European countries mentioned in the table.

[2] Twelve months ending 30 June of year stated.

[3] Source: World Metal Statistics, (London).

[4] Estimate.

[5] Source: U.S. Bureau of Mines, (Washington, D.C.).

[6] Includes 44.7 th. mt. for America, South.

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Table 2. Copper Scrap Recovery*
(thousand metric tons)

A. Refined copper from scrap

COUNTRY/REGION	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
U.S.A.	402.9	439.0	300.8	318.6	319.7	382.9	498.5	515.1	493.6	467.5	401.6
Germany, Fed. Rep. of	165.4	203.5	164.0	161.0	164.0	159.1	187.2	186.4	180.0	177.1	207.8
Japan	133.3	127.2	76.9	95.0	85.3	104.6	130.0	124.8	120.2	126.8	147.4
Belgium - Luxembourg	58.0	96.0	60.0	66.0	56.0	56.0	55.0	69.0	58.0	81.0	80.0
United Kingdom	95.0	91.0	76.0	85.7	77.8	79.4	73.1	93.1	76.3	71.0	76.8
Spain	28.3	31.9	32.5	30.5	28.5	25.0	16.0	21.5	29.8	41.3	46.2
Yugoslavia	3.8	10.3	14.0	14.9	50.5	46.9	38.3	39.5	41.9	44.4	40.8
Australia	33.1	32.0	27.7	28.0	31.1	22.8	33.1	33.6	26.8	17.9	36.4
France	22.0	8.0	15.0	19.0	16.0	20.0	31.0	37.0	33.0	27.0	36.0
Canada	32.0	25.0	25.0	31.0	32.0	35.0	37.0	40.0	29.0	24.0	35.0
Austria	17.0	20.1	18.6	21.2	21.8	16.1	24.9	21.5	30.4	32.9	33.4
Italy	17.0	21.7	20.0	22.0	14.2	12.8	8.8	10.0	23.6	19.6	31.2
Other Europe [1]	24.0	25.0	19.5	19.0	25.0	24.0	21.0	21.0[2]	19.0[2]	23.0[2]	30.0[2]
Brazil	25.5	33.8	27.2	31.1	28.6	25.9	33.9	38.9	26.9	35.7	25.4
Mexico	5.0	6.0	7.0	8.0	6.0	2.9	12.8	14.9	5.5	13.9	21.5
Republic of Korea[2]			11.7	9.6	22.1	21.5	16.8	18.3	5.8	4.0	11.3
TOTAL[3]	1,062.3	1,170.5	895.9	960.6	978.6	1,034.9	1,217.4	1,284.6	1,199.8	1,207.1	1,260.8

B. Direct scrap use by manufacturers

COUNTRY/REGION	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
U.S.A.	956.6	878.1	662.5	800.6	847.6	888.1	984.5	860.2	883.7	698.2	783.9
Japan	422.0	394,0	290.0	364.0	363.0	370.0	406.0	402.0	443.0	476.0	436.6
Germany, Fed. Rep. of	179.4	132.5	106.7	145.2	73.9	144.9	202.6	275.9	231.4	227.9	250.8
Italy	183.0	177.0	128.5	198.0	207.0	190.0	191.0	219.0	191.0	183.0	192.0
Other Western countries[2][4]	132.0	146.0	91.0	112.0	113.0	102.0	118.0	174.0	202.0	204.0	189.0
France	160.8	121.1	103.7	114.7	126.5	114.6	119.6	126.8	116.0	104.0	119.0
United Kingdom	177.5	164.1	124.4	147.3	131.0	146.8	117.6	121.2	128.0	128.4	109.6
Scandinavia[5]	76.0	60.0	48.0	52.0	55.0	65.0	63.0	54.0	50.0	54.0	53.0
Yugoslavia	31.0	48.0	48.0	49.0	39.0	43.0	37.0	42.0	54.0	50.0	50.0
Other Europe[1][2]	22.0	24.0	12.0	18.0	17.0	20.0	20.0	36.0	38.0	43.0	44.0
Australia	43.0	43.0	36.0	37.0	35.0	34.0	40.0	44.0	49.0	46.0	41.0
Republic of Korea[2][6]			18.0	22.0	25.0	41.0	38.0	14.0	19.0	18.0	30.0
Switzerland	36.0	30.0	15.0	14.0	17.6	21.7	23.0	25.0	22.8	25.0[2]	25.0[2]
Belgium - Luxembourg	49.6	33.2	29.9	34.4	32.1	29.3	28.2	30.2	29.4	17.0	25.0[2]
Spain	29.3	17.5	15.2	22.0	26.0[2]	27.0[2]	26.0[2]	17.0[2]	20.0[2]	24.0[2]	24.0[2]
Canada	36.0	37.0	20.0	19.6	22.8	17.6	24.8	18.9	21.0	23.0	24.0
Netherlands	25.4	27.8	20.4	18.8	20.0	35.2	20.4	17.0	26.2	29.3	23.4
Brazil	17.5	23.0	18.0	21.0	21.0	17.0	23.0	28.0	18.0	24.0	15.0
Taiwan[2][6]			3.0	4.0	7.0	9.0	11.0	20.0	16.0	12.0	15.0
TOTAL[3]	2,577.1	2,356.3	1,790.3	2,193.6	2,179.7	2,316.4	2,493.7	2,525.2	2,558.5	2,386.8	2,447.3
TOTAL SCRAP RECOVERY (A+B)[3]	3,639.4	3,526.8	2,686.2	3,154.2	3,158.3	3,351.3	3,711.1	3,809.8	3,756.3	3,593.9	3,708.1

Source: Metallgesellschaft AG, Metallstatistik 1973-1983, Frankfurt Am Main, 1984, p. 36.

*The table is arranged according to the ranking of countries/regions on the basis of 1983 scrap recovery.

1/Europe excluding Eastern European countries and the European countries included in the table.

2/Estimate.

3/Excludes Eastern European countries.

4/Excluding Eastern European countries and the Western countries included in the table.

5/Includes Denmark, Finland, Norway and Sweden.

6/1973 and 1974 figures for Korea and Taiwan are included in "Other Western Countries".

/...

Table 3. Copper scrap recovery*
(thousand metric tons)

A. Production of secondary refined copper

Country/ Region	1979	1980	1981	1982	1983
U.S.A.	460	475	452	456	399
Germany FR	187	186	180	159	182
Japan	130	125	120	127	147
U.K.	73	93	76	71	77
Belgium	55	69	58	81	71
Australia	39	44	33	23	44
France	31	37	33	27	41
Canada	37	40	29	24	35
Austria	24	34	30	33	33
Italy	9	12	24	20	31
Brazil	34	39	27	36	25
Sweden	13	11	13	17	23
Spain	18	5	15	26	21
Rep of Korea	13	12	5	5	12
Finland	8	8	5	4	12
Mexico	10	11	5	13	6
TOTAL	1,154	1,201	1,105	1,122	1,159

B. Direct scrap used by manufacturers 1/

U.S.A.	984	860	884	698	784
Japan	406	402	443	476	518
Germany FR	216	276	235	222	251
Italy	191	219	199	183	192
Other Asia 2/	76	97	121	120	150
U.K.	118	121	128	128	110
France	118	127	116	104	104
Scandinavia 3/	63	54	50	54	53
Other America 4/	64	74	82	80	51
Yugoslavia	37	42	54	50	43
Australia	40	44	49	46	42
Switzerland	36	41	35	31	34
Benelux 5/	46	41	39	33	28
South Africa	22	31	32	30	27
Canada	23	21	21	23	24
Spain	26	17	20	24	22
Greece	10	18	22	22	22
Brazil	23	28	18	24	17
Portugal	4	7	8	11	12
Austria	6	11	8	10	8
Other Africa 6/	5	6	2	4	4
TOTAL	2,534	2,537	2,566	2,373	2,496
TOTAL SCRAP RECOVERED (A + B)	3,668	3,738	3,671	3,495	3,655

Source: World Bureau of Metal Statistics, World Metal Statistics, London, February 1965, p.37

* The table is arranged according to the ranking of countries/regions on the basis of 1983 scrap recovery.

1/ Includes scrap in ingotted form.
2/ Asia excluding Japan.
3/ Includes Denmark, Finland, Norway and Sweden
4/ America excluding Brazil, Canada and U.S.A.
5/ Includes Belgium, Luxembourg and Netherlands.
6/ Africa excluding South Africa.

Table 4. Value of Exports of copper waste and scrap *

(thousand U.S. dollars)

COUNTRIES	Value of exports				
	1978	1979	1980	1981	1982
USA	149 331	211 177	269 651	193 028	172 418
France	98 013	144 949	162 584	138 913	151 074
United Kingdom	46 223	87 692	143 771	88 032	108 615
Netherlands	44 911	79 196	96 603	75 284	61 359
Germany, Fed. Republic	53 986	65 216	90 281	71 898	59 148
Canada	34 408	52 119	66 031	53 988	61 214
Belgium -Luxembourg	21 188	36 871	39 266	28 768	32 587
Italy	9 567	23 136	16 805	33 267	21 986
Hong Kong	10 318	17 199	23 586	23 916	21 331
Singapore	11 190	19 958	23 484	20 722	17 924
Switzerland	5 283	17 845	21 043	16 607	15 792
Denmark	11 707	16 390	21 786	15 762	12 743
Yugoslavia	3 912	11 249	11 250	7 562	3 779
Ireland	5 986	8 690	9 241	8 830	8 254
Malaysia	2 917	6 385	8 203	7 837	30 191 1/
Austria	2 258	3 514	5 178	5 998	4 875
Norway	2 747	4 447	4 637	3 591	2 642
Kuwait				10 264 1/	6 911 1/
Nigeria			5 181 1/	3 900 1/	3 159 1/
Lebanon		2 645 1/	3 728 1/	2 682 1/	3 885 1/
Israel	1 846	2 417	3 364	1 940	2 517
Morocco	1 404	2 640	2 239	2 210	2 062
Saudi Arabia	275	1 439	1 445	2 928	3 568
Algeria	1 487	1 564	1 685	2 538 1/	2 443 1/
Philippines	2 183	1 192	2 818	1 570	1 289 1/
Cuba			2 935 1/	2 412 1/	2 064 1/
Ghana		1 759 1/	1 614 1/	1 365 1/	1 364 1/
Ivory Coast	949	1 691	1 461 1/	1 494	1 191
So. Afr.Customs Union	819	984	352	3 073	
Chile	2 778	729 1/	2 037	1 091 1/	1 060 1/
Tunisia	336	749	1 119	1 892	576 1/
Greece	556	177	1 283	2 168	408
Sweden	236	733	2 052	730	1 024
United Arab Emirates	852	1 234 1/	1 874 1/		1 526 1/
Spain	765	1 083	1 516	293	143
Mexico		3	1 344 1/	1 446 1/	7 453 1/
Senegal	599	820	954	692	1 022 1/
Benin	503 1/	739 1/	1 099 1/	559 1/	410 1/
Australia		771	909	554	389
New Zealand	431	694	792	664	651
Qatar			1 054 1/	1 095 1/	786 1/
Korea Republic	216	757	904	403	1 474 1/
Cyprus	191	524	538	804	430
Malta	335	663	597	525	568 1/
Netherlands Antilles		383 1/	582 1/	719 1/	594 1/
Kenya	270	561	492	372 1/	299 1/
Gibraltar		463 1/	452 1/	463 1/	497 1/
Venezuela		308	335	522	710 1/
Cameroon	50	288	497	357 1/	419
Japan	511	277	668	175	637
World Market Economy	533 410	837 235	1 065 866	852 976	850 401

Source: United Nations, Department of International Economic and Social Affairs, Statistical Office, 1982 Yearbook of International Trade Statistics, Volume II, UN, New York, 1984, P.376.

*The table is arranged according to the ranking of countries on the basis of 5-year average.

1/ Estimate.

/...

Table 5. Quantity of exports of copper waste and scrap* 1/

(thousand metric tons)

Country	1980	1981	1982	1983
Australia 2/	0.0	0.2	0.3	
Austria 2/	3.7	5.4	5.0	9.1
Belgium	26.4	24.1	36.0	27.8
Canada	42.8	40.9	56.7	53.4
Denmark	15.1	13.1	11.9	15.7
France	108.4	108.2	112.3	126.6
Germany FR	66.8	67.8	61.5	67.1
Italy 2/	11.1	24.5	19.6	20.3
Japan 2/	0.5	1.3	0.4	0.4
Netherlands	58.4	57.4	53.6	59.1
Sweden	1.8	1.0	2.2	2.0
Switzerland	12.1	11.5	13.3	18.9
U.K.	82.9	65.6	92.7	104.7
U.S.A.	191.6	146.2	147.0	135.7

Source: Except for Australia, Austria, Japan and Italy: World Bureau of Metal Statistics, World Metal Statistics, London, February 1985, various pages.
For Australia, Austria, Japan and Italy: Metallgesellschaft AG., Metallstatistik 1973-1983, Frankfurt Am Main, 1984, various pages.

* The table is arranged according to the alphabetical order of countries.

1/ Copper and copper alloy scrap.

2/ Old and new scrap.

Table 6. Value of imports of copper waste and scrap

(thousand U.S. dollars)

COUNTRIES	Value of imports				
	1978	1979	1980	1981	1982
Germany. Fed. Republic	149 035	260 719	310 537	208 811	216 842
Belgium-Luxembourg	88 435	152 352	216 329	148 361	140 763
Italy	64 924	85 855	132 735	60 895	67 760
Japan	62 094	67 089	80 592	78 050	70 661
USA	36 025	48 683	56 687	57 050	45 318
Korea,Republic of	62 102	77 031	30 957	40 586	22 478 1/
India	17 673 1/	42 294 1/	54 456 1/	50 584 1/	53 880 1/
France	19 181	32 554	58 399	36 919	29 593
Canada	23 237	37 327	42 256	36 840	34 711
Spain	5 711	20 383	50 707	41 869	48 167
Netherlands	16 336	24 988	36 721	35 436	35 508
Austria	9 663	21 762	27 174	13 449	15 487
United Kingdom	15 672	19 388	16 111	12 855	11 091
Finland	694	4 111	13 512	9 646	2 364
Sweden	4 642	5 926	10 634	8 457	17 028
Mexico	347	1 973	8 241 1/	10 171 1/	
Singapore	1 871	3 797	6 616	6 627	6 111
Switzerland	5 379	4 408	6 802	4 270	4 033
Denmark	1 306	3 710	3 686	5 895	3 474
Brazil	1 441	3 484	6 242	2 464	1 951
Turkey	364	1 102	2 014	3 661	4 468
Hong Kong	1 746	1 997	2 879	1 459	1 552
Australia	626	1 095	2 209	1 444	1 182
Greece	83	320	655	3 241	3 137
Egypt	909	255	2 951		58
United Arab Emirates	21 1/	826	924	618	37 1/
Thailand	831	699	577	754	270
Saudi Arabia	594	967	65	646	204
Norway	404	307	661	402	102
Ireland	137	116	342	664	465
Argentina	0	899	214	3	3
So.Afr. Customs Union	111	51	417	318	
Portugal	728	199	218	118	148
Malaysia	29	77	92	242	237 1/
Chile	0	98 1/	102	128 1/	71 1/
Zimbabwe	41 1/	61 1/	109 1/	137 1/	134 1/
Lebanon		57 1/	74 1/	86 1/	123 1/
Philippines	4		125	43	83 1/
Kuwait				163 1/	203 1/
Ghana		49 1/	49 1/	51 1/	44 1/
Yugoslavia	0	1		143	252
Syrian Arab Republic				139 1/	111 1/
Netherlands Antilles		31 1/	31 1/	38 1/	39 1/
Algeria	28	45	0	45	142 1/
Angola	18 1/	21 1/	29 1/	39 1/	30 1/
Uruguay		26	33	26	
Belize		25 1/	21 1/	29 1/	21 1/
Jordon				59	123
Malta	68	53			1 1/
Colombia	29	2	39	0	
World Market Economy	592 614	927,280	1,184,250	883,995	841,202

Source: United Nations, Department of International Economic and Social Affairs, Statistical Office, 1982 Yearbook of International Trade Statistics, Volume II, UN, New York, 1984, p. 376.

*The table is arranged according to the ranking of countries on the basis of 5-year average.

1/ Estimate.

/...

Table 7. Quantity of imports of copper waste and scrap* 1/
(thousand metric tons)

Country	1980	1981	1982	1983
Australia 2/	1.4	1.6	1.5	
Austria	20.1	18.1	29.0	27.7
Belgium	124.5	104.7	113.6	131.9
Canada	35.0	37.9	41.0	71.5
France	36.7	29.6	28.8	32.7
Germany FR	178.5	149.9	177.1	205.4
India	24.0	20.0	23.5	17.4
Italy	99.5	59.3	71.7	82.4
Japan	49.9	51.9	56.4	57.5
Netherlands	29.5	37.7	38.2	38.0
Spain 2/	32.3	32.2	36.9	32.1
Sweden	5.0	3.3	10.4	22.4
Switzerland	3.6	3.8	3.7	2.2
U.K.	9.2	8.1	10.0	10.0
U.S.A	29.8	35.2	35.2	54.9

Source: Except for Australia and Spain:

World Bureau of Metal Statistics, World Metal Statistics, London, February 1985, various pages.

For Australia and Spain: Metallgesellschaft A.G., Metallstatistik 1973-1983, Frankfurt Am Main, 1984, various pages.

* The table is arranged according to the alphabetical order of countries.

1/ Copper and copper alloy scrap.
2/ Old and new scrap.

/...

Table 8. Refinery buying prices for no. 2 copper scrap 1/
(cents per pound)

Year	Average price
1974 2/	67.75
1975	41.12
1976	47.71
1977	44.36
1978	50.69
1979	70.97
1980	74.45
1981	64.29
1982	40.23
1983	57.66

Source: American Metal Market, Metal Statistics 1984, Fairchild Publications, New York, 1984, p.76.

1/ Annual averages of monthly averages of refiners' buying prices at New York for wholesale lots of no. 2 copper scrap, compiled from daily quotations published in American Metal Market.

2/ Estimated quotations in absence of oficially posted prices.

Table 9. Copper recovered from scrap processed in the U.S., by form of recovery and kind of scrap
(thousand metric tons)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
As unalloyed copper	439.6	465.7	322.5	354.5	364.7	437.1	516.3	534.6	514.5	481.6	418.8
In brass and bronze	769.5	714.1	518.9	635.8	670.7	756.0	976.4	850.2	850.5	660.1	630.0
In other alloys	36.8	37.4	38.1	45.1	46.7	51.2	56.8	49.8	49.9	43.5	38.5
In chemical compounds	3.4	2.4	2.2	3.6	3.3	2.9	3.0	2.9	3.2	2.3	1.1
Total	1,249.3	1,219.6	881.7	1,039.0	1,085.4	1,247.2	1,552.5	1,437.5	1,418.1	1,187.5	1,088.4
of which: New scrap	808.3	781.0	546.8	658.8	675.5	745.6	948.2	824.0	820.0	669.8	633.2
Old scrap	441.0	438.6	334.9	380.2	409.9	501.6	604.3	613.5	598.1	517.7	455.2

Source: Metallgesellschaft AG., Metallstatistik 1973-1983. Frankfurt Am Main, 1984, p.273.

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Table 10. Exports of nickel waste and scrap*

(thousand metric tons)

Country	1980	1981	1982	1983
Canada[1/]	2.4	2.8	3.3	3.0
Finland	-	-	0.4	4.6
France [2/]	2.2	2.5	2.1	2.1
Norway [2/]	0.4	0.6	0.2	0.1
U.K.[2/]	4.5	4.2	5.1	5.6
U.S.A.[2/]	18.7	9.8	10.0	12.1

Source: World Bureau of Metal Statistics, World Metal Statistics, London, February 1985, various pages.

*The table is arranged according to the alphabetical order of countries.

[1/] Nickel and alloy scrap.

[2/] Nickel and nickel alloy waste and scrap.

Table 11. Imports of nickel waste and scrap*

(thousand metric tons)

Country	1980	1981	1982	1983
Finland	1.9	1.4	2.0	2.0
France[1/]	0.8	1.0	0.5	0.5
Germany, FR[1/]	7.6	5.5	6.4	4.9
Japan[1/]	1.8	1.9	2.9	3.7
U.K.[1/]	2.3	2.4	3.4	2.3
U.S.A.[1/]	3.2	4.7	3.9	5.5

Source: World Bureau of Metal Statistics, World Metal Statistics, London, February 1985, various pages.

*The table is arranged according to the alphabetical order of countries.

[1/] Nickel and nickel alloy waste and scrap.

Table 12. Secondary production of nickel in the U.S.[1]

(metric tons)

	1979	1980	1981	1982
Secondary nickel production	11,976	10,286	10,611	7,763

Source: Bureau of Mines, United States Department of the Interior, Minerals Yearbook 1983, Volume 1, U.S. Govt. Printing Office, Washington, DC, 1984, p.631.

[1] Non-ferrous scrap only; does not include nickel from stainless or alloy steel scrap.

Table 13. Nickel recovered from non-ferrous scrap processed in the U.S. by kind of scrap and form of recovery

(metric tons)

Kind of scrap	1981	1982
New scrap:		
Nickel-base	1,193	957
Copper-base	2,435	1,750
Aluminium-base	1,613	1,502
Total	5,241	4,209
Old scrap:		
Nickel-base	4,435	2,754
Copper-base	475	358
Aluminium-base	459	441
Total	5,370	3,554
Grand Total	10,611	7,763

Form of recovery	1981	1982
As metal	494	467
In nickel-base alloys	2,428	1,334
In copper-base alloys	3,904	2,462
In aluminium-base alloys	2,154	2,214
In ferrous and high temperature alloys[1]	1,062	927
In chemical compounds	569	358
Total	10,611	7,763

Source: American Metal Market, Metal Statistics 1984, Fairchild Publications, New York, 1984, p.127.

[1] Includes only nonferrous scrap added to ferrous high-temperature alloys.

Table 14. Consumption of purchased scrap of cobalt in the U.S.

(metric tons of contained cobalt)

	1979	1980	1981	1982	1983
Purchased scrap of cobalt	531	537	441	395	328

Source: Bureau of Mines, United States Department of the Interior, Minerals Yearbook 1983, Volume I, U.S. Govt. Printing Office, Washington, DC, 1984, p.257.

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LOS/PCN/SCN.1/WP.2/Add.5
27 February 1989

ORIGINAL: ENGLISH

PREPARATORY COMMISSION FOR THE
INTERNATIONAL SEA-BED AUTHORITY
AND FOR THE INTERNATIONAL TRIBUNAL
FOR THE LAW OF THE SEA
Special Commission 1
Kingston, 27 February-23 March 1989

BASIC DATA AND INFORMATION OF RELEVANCE TO THE WORK OF SPECIAL COMMISSION 1

Background paper by the Secretariat

1. In his statement to the plenary on the progress of work in Special Commission 1 during the sixth session of the Preparatory Commission, the Chairman of the Special Commission mentioned, " ... In a working paper prepared by the Secretariat for Special Commission 1 (LOS/PCN/SCN.1/WP.2/Add.1) the Secretariat presented data on production, consumption, exports, imports and prices of copper, nickel, cobalt and manganese, on a country-by-country basis, covering the 10-year period 1973-1982. These data were collected from published sources. There is a need for updating the data contained in that document, covering the recent past period and also for continued updating in the future." (LOS/PCN/L.58, para. 22). The present paper is intended to respond to that need, by providing available data for the most recent period.

2. As has been stated in one of the earlier reports of the Chairman, "The usefulness of having timely statistics at the disposal of the Special Commission and, later, of the Authority, was recognised (by the Special Commission). It was agreed that the collection, processing and dissemination of statistics is an ongoing process." (LOS/PCN/L.9, para. 15). In that context, the Special Commission suggested that "for the purpose of keeping abreast of the mineral situation, the Secretariat should develop a cost-effective data bank ...". (LOS/PCN/L.58, para. 22).

3. In response to these directives the Secretariat has initiated the development of a Mineral Database (MINDAT).* The present paper has been prepared through the use of that database.

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* MINDAT is a component of the computerised Law of the Sea Information System (LOSIS). LOSIS, maintained and being further developed by the Secretariat, is composed of a group of databases containing information pertaining to the law of the sea and related issues, which are updated on a continuing basis.

4. The Mineral Database contains, at present, 25 categories of information on the four minerals concerned, relating to their production, consumption, export and import, on a country-by-country basis including world totals, for the period 1971-1986. Various categories of raw data on these minerals exist in different databases and publications within and outside the United Nations system. For the purpose of the Mineral Database, raw data on the categories relevant for the work of Special Commission 1 are being collected from the existing sources and put in one place. This facilitates carrying out various types of statistical functions useful for the work of Special Commission 1. In addition, this makes a continued updating of the data cost efficient, and contributes to a timely dissemination of processed information.

5. With regard to the sources of data, Special Commission 1 came to important conclusions. "The formation of the statistical base for the work of the Special Commission should be based on a two-pronged approach: (1) the Secretariat should continue updating statistics collected from published sources, including national governmental publications and publications of regional commissions, and (2) at the same time, the States themselves should transmit to the Secretariat the responses to the note verbale from the Secretary-General, requesting certain statistics." (LOS/PCN/L.9, para. 16). With regard to the collection of raw data for the Mineral Database, this two-pronged approach is being pursued. It should be recalled that in 1985, in response to a note verbale sent by the Secretary-General, States provided data on past and current production, consumption, exports and imports, production capacity, plans and projections for future production, with regard to the four minerals concerned. Those data were presented in document LOS/PCN/SCN.1/WP.2/Add.3. The Secretariat is in the process of incorporating those data in the Mineral Database. It is anticipated that with a view to updating those data, following the requests of the Special Commission, further note verbales would be sent in due time. Updated data from the responses to such note verbales would be incorporated in the Mineral Database in the future.

Presentation of data and sources of data

6. The statistical tables are contained in Annex II. Table 1 identifies the developing land-based producer States of one or more of the four minerals - copper, nickel, cobalt and manganese. Tables 2-26 present statistics on production, consumption, exports and imports of these minerals for the recent period, on a country-by-country basis. Tables 27-29 present information on gross domestic product (GDP), total exports and the significance of the exports of the four minerals concerned in relation to GDP and total exports of developing land-based producer States. The detailed list of tables is in Annex I.

7. Since the present paper is an update of document LOS/PCN/SCN.1/WP.2/Add.1, the general format of the tabular presentation has been kept similar to that in the latter. In view of the interest in the recent period, data for 1981-1986 have been presented on an annual basis; for the earlier periods five-year averages have been given. A five-year average for 1981-1985 has also been presented; in tables 2-26, statistics are presented for countries in descending order of this average. (It should be noted that owing to the non-availability of data for this period for certain countries, there may appear anomalies in ranking).

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8. The observations made in the introduction of document LOS/PCN/SCN.1/WP.2/Add.1 with regard to the nature of the data are still valid; the attention of Special Commission 1 is drawn to those observations.

9. Statistics on production have been extracted from the "Industrial Production" database of the United Nations Statistical Information System (UNSIS), maintained by the United Nations Statistical Office. The relevant printed product is: United Nations, Yearbook of Industrial Statistics, Vol. II, Commodity Production Data. Statistics on consumption have been obtained from: Metallgesellschaft A.G., Metallstatistik, 1970-1980 and 1976-1986, Frankfurt Am Main, 1981 and 1987. Statistics on exports and imports of the four minerals concerned and total exports have been extracted from the "Comtrade" database of UNSIS. The relevant printed products are United Nations, International Trade Statistics Yearbook, Vols. I and II. Statistics on GDP have been extracted from the "National Accounts" database of UNSIS. The relevant printed product is United Nations, National Accounts Statistics: Analysis of Main Aggregates. It is recommended that for details of nomenclature, definition, data collection, processing and presentation procedures, these data sources themselves be consulted.

10. It should be noted that with regard to exports and imports, in some cases, there may be differences between statistics presented in the Yearbook and those obtained from the "Comtrade" database. First, the "Comtrade" database is continuously updated so that new data reported after the publication of the Yearbook are included in the database. Secondly, while the Yearbook presents estimated data in some cases, the "Comtrade" database does not include such data. Finally, the statistics in the Yearbook are presented according to the Standard International Trade Classification (SITC), Revision 2. However, for the purpose of maintaining a long historical series, the statistics in the "Comtrade" database are according to the Standard International Trade Classification (SITC), Revision 1. As has been mentioned in LOS/PCN/SCN.1/WP.2/Add.1, there are slight differences between these two classifications.

11. It is regretted that because of the extreme difficulties encountered with regard to data availability, statistics on consumption of cobalt, manganese and ferromanganese as well as on exports and imports of cobalt could not be presented in the present paper.

12. The designations employed and the presentation of the material in this paper do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitation of its frontiers or boundaries.

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ANNEX I

List of tables

DEVELOPING LAND-BASED PRODUCER STATES

Table 1. Developing land-based producer States/territories

PRODUCTION

Table 2. Production of copper ores and concentrates, by country, 1971-1986
Amount of copper content

Table 3. Production of nickel ores and concentrates, by country, 1971-1986
Amount of nickel content

Table 4. Production of cobalt ores and concentrates, by country, 1971-1986
Amount of cobalt content

Table 5. Production of manganese ores and concentrates, by country, 1971-1986
Amount of manganese content

Table 6. Production of ferromanganese, by country, 1971-1986
Amount of ferromanganese content

CONSUMPTION

Table 7. Consumption of refined copper, by country, 1971-1986
Amount of copper content

Table 8. Consumption of refined nickel, by country, 1971-1986
Amount of nickel content

EXPORTS

Table 9. Exports of copper ores and concentrates, copper matte and cement copper, by country, 1976-1986
F.O.B. Value

Table 10. Exports of copper waste and scrap, by country, 1976-1986
F.O.B. Value

Table 11. Exports of copper and copper alloys, refined or not, unwrought, by country, 1976-1986
F.O.B. Value

Table 12. Exports of copper and copper alloys, worked, by country, 1976-1986
F.O.B. Value

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Table 13. Exports of nickel ores and concentrates, nickel matte, nickel sinters and other intermediate products of nickel metallurgy, by country, 1976-1986
F.O.B. Value

Table 14. Exports of nickel and nickel alloys, unwrought, by country, 1976-1986
F.O.B. Value

Table 15. Exports of nickel and nickel alloys, worked, by country, 1976-1986
F.O.B. Value

Table 16. Exports of manganese ores and concentrates, by country, 1976-1986
F.O.B. Value

Table 17. Exports of ferromanganese, by country, 1976-1986
F.O.B. Value

IMPORTS

Table 18. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1976-1986
C.I.F. Value

Table 19. Imports of copper waste and scrap, by country, 1976-1986
C.I.F. Value

Table 20. Imports of copper and copper alloys, refined or not, unwrought, by country, 1976-1986
C.I.F. Value

Table 21. Imports of copper and copper alloys, worked, by country, 1976-1986
C.I.F. Value

Table 22. Imports of nickel ores and concentrates, nickel matte, nickel sinters and other intermediate products of nickel metallurgy, by country, 1976-1986
C.I.F. Value

Table 23. Imports of nickel and nickel alloys, unwrought, by country, 1976-1986
C.I.F. Value

Table 24. Imports of nickel and nickel alloys, worked, by country, 1976-1986
C.I.F. Value

Table 25. Imports of manganese ores and concentrates, by country, 1976-1986
C.I.F. Value

Table 26. Imports of ferromanganese, by country, 1976-1986
C.I.F. Value

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SIGNIFICANCE OF THREE MINERALS IN THE ECONOMIES OF DEVELOPING LAND-BASED PRODUCER STATES

Table 27. Total exports of developing land-based producer States, by country, 1976-1985
F.O.B. Value

Table 28. Gross domestic product (GDP) of developing land-based producer States, by country, 1976-1986

Table 29. Exports of copper, nickel and manganese by developing land-based producer States as percentages of their total exports and gross domestic product (GDP), by country, average of 1981-1985

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Table 1. Developing land-based producer States 1/

Country/Territory	Copper	Nickel	Cobalt	Manganese	Ferromanganese
Algeria	x				
Argentina	x			x	x
Bolivia	x				
Botswana	x	x	x		
Brazil	x	x		x	x
Burma	x	x			
Chile	x			x	x
Congo	x				
Cuba	x	x	x		
Cyprus	x				
Dominican Republic		x			
Ecuador	x				
Egypt				x	
Gabon				x	
Ghana				x	
Guatemala	x	x			
India	x			x	x
Indonesia	x	x		x	
Iran (Islamic Republic of)	x			x	
Malaysia	x				
Mauritania	x				
Mexico	x	x		x	
Morocco	x	x	x	x	
Mozambique	x				
Namibia	x				
New Caledonia		x			
Pakistan				x	
Papua New Guinea	x				
Peru	x			x	
Philippines	x	x	x	x	
Republic of Korea	x	x			x
Sudan				x	
Thailand				x	
Turkey	x			x	
Uganda	x				
Vanuatu				x	
Venezuela					x
Zaire	x		x	x	
Zambia	x		x		
Zimbabwe	x	x	x		x

Sources: Tables 2 to 6

1/ Developing countries and territories identified in accordance with the list given in Handbook of International Trade and Development Statistics, Supplement 1980 (United Nations publication, Sales No. E/F.80.II.D.10), pp. viii-x. Includes developing territories, excludes centrally planned economies of Asia and Europe.

Table 2. Production of copper ores and concentrates, by country, 1971-1986
Amount of copper content

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971-75)	5-year average (1976-80)	5-year average (1981-85)
Chile	1 105.5	1 255.1	1 255.4	1 307.5	1 359.8	n.a.	784.4	1 045.4	1 256.7
United States	1 538.2	1 147.8	1 038.1	1 091.3	1 105.8	1 147.3	1 436.1	1 361.2	1 184.1
USSR	1 000.0	1 010.0	1 020.0	1 020.0	1 030.0	1 030.0	950.0	976.0	1 016.0
Canada	718.1	612.5	653.0	721.8	730.3	n.a.	750.7	700.5	687.2
Zambia	609.8	672.8	649.9	633.4	565.7	536.4	848.0	774.6	642.3
Zaire	504.8	494.8	502.2	500.7	502.1	n.a.	465.4	442.3	500.9
Poland	389.6	366.7	393.2	398.3	398.5	414.1	174.5	315.0	373.3
Peru	342.1	369.5	335.6	375.1	402.0	397.4	208.4	339.3	364.8
Philippines	302.3	292.1	271.4	233.4	222.6	217.0	216.8	275.3	264.3
Australia	246.4	259.7	235.3	249.3	251.8	n.a.	205.2	225.3	248.5
Mexico	230.5	239.1	206.1	189.1	168.0	174.6	76.6	109.7	206.5
South Africa	199.4	188.7	205.0	198.2	195.4	184.2	168.2	199.9	197.3
China	170.0	175.0	175.0	180.0	185.0	n.a.	165.0	112.0	177.0
Papua New Guinea	165.4	170.0	201.2	164.4	175.0	173.9	132.7	175.0	175.2
Yugoslavia	111.0	119.3	129.5	137.6	142.5	138.5	107.3	117.2	128.0
Sweden	53.8	52.7	75.3	90.4	92.2	89.4	37.4	45.4	72.9
Bulgaria	62.0	65.0	68.0	73.0	78.0	n.a.	49.1	58.8	69.2
Indonesia	60.1	70.5	65.4	60.7	74.3	n.a.	42.8	61.0	66.2
Spain	50.9	47.6	54.8	63.1	56.9	51.1	32.2	37.4	54.7
Namibia	44.3	48.8	52.1	50.0	47.0	50.4	28.9	42.3	48.4
Japan	51.5	50.7	46.0	43.3	43.2	n.a.	98.2	69.3	46.9
India	25.6	30.4	46.6	52.2	49.7	n.a.	17.8	27.4	40.9
Iran (Islamic Republic of)	2.0	:3.0	57.6	43.3	50.0	n.a.	1.4	5.9	39.2
Brazil	11.8	24.5	40.0	44.4	49.7	n.a.	3.7	0.1	34.1
Finland	38.2	38.1	37.7	29.5	26.6	n.a.	34.1	43.1	34.0
Turkey	32.1	32.8	24.8	38.6	34.5	36.9	28.9	28.3	32.5
Romania	30.0	30.0	28.0	30.0	30.0	28.0	36.2	28.2	29.6
Malaysia	28.6	30.1	29.0	28.9	30.5	28.3	0.8	23.9	29.4
Norway	28.1	27.9	22.6	25.0	19.3	23.7	26.0	29.4	24.6
Zimbabwe	24.6	24.7	21.6	22.7	20.4	17.4	45.6	33.3	22.8
Botswana	17.8	18.4	20.3	21.5	21.7	n.a.	1.9	13.8	19.9
Morocco	6.3	17.6	19.5	18.1	16.7	22.1	4.3	4.7	15.6
Dem. People's Republic of Korea	15.0	15.0	15.0	15.0	15.0	15.0	13.0	15.0	15.0
German Democratic Republic	12.0	13.0	12.0	12.0	12.0	n.a.	17.5	14.8	12.2
Czechoslovakia	9.5	10.0	10.0	10.0	10.1	n.a.	11.2	10.2	9.9

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Table 2. Production of copper ores and concentrates, by country, 1971-1986
Amount of copper content
(continued)

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971-75)	5-year average (1976-80)	5-year average (1981-85)
Congo	6.3	3.4	3.9	2.5	2.9	n.a.	3.2	4.2	3.8
Cuba	3.0	2.7	2.7	2.7	3.1	n.a.	2.4	2.9	2.8
Bolivia	2.6	2.3	2.0	1.6	1.7	n.a.	7.7	3.1	2.0
Germany, Federal Republic of	1.4	1.3	1.2	1.0	0.9	n.a.	1.6	1.2	1.2
Ireland	3.5	1.6	0.0	0.0	0.0	n.a.	12.2	4.5	1.0
Cyprus	0.2	0.8	1.1	1.3	1.1	n.a.	13.8	4.3	0.9
Italy	0.8	0.1	1.6	0.9	0.1	n.a.	1.1	0.6	0.7
United Kingdom	0.7	0.6	0.7	0.7	0.6	0.6	n.a.	0.7	0.7
Republic of Korea	0.8	0.5	0.6	0.5	0.3	0.2	4.1	1.9	0.6
Portugal	0.6	0.5	0.4	0.4	0.3	0.2	0.6	0.5	0.4
Guatemala	0.7	0.7	0.0	0.0	0.0	n.a.	n.a.	1.8	0.3
Burma	0.3	0.2	0.3	0.3	0.2	n.a.	0.1	0.1	0.2
Ecuador	0.8	0.0	0.0	0.2	0.1	n.a.	0.4	0.8	0.2
Algeria	0.2	0.2	0.1	0.2	0.2	n.a.	0.4	0.2	0.2
Argentina	0.1	0.0	0.0	0.2	0.4	n.a.	0.5	0.2	0.2
France	0.1	0.1	0.2	0.2	0.1	n.a.	0.2	0.1	0.2
Mauritania	n.a.	n.a.	n.a	n.a	n.a	n.a	15.5	6.3	0.0
Uganda	0.0	0.0	0.0	0.0	0.0	0.1	12.9	2.5	0.0
Mozambique	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.1	0.0
Nicaragua	0.0	0.0	0.0	0.0	0.0	0.1	2.0	0.4	0.0
Austria	0.0	0.0	0.0	0.0	0.0	n.a.	2.5	0.2	0.0
Hungary	0.0	0.0	0.0	0.0	0.0	n.a.	0.4	0.2	0.0
New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
World Total	8 277.7	8 097.7	8 052.7	8 203.7	8 241.6	8 262.9	7 313.0	7 806.4	8 174.7

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Table 3. Production of nickel ores and concentrates, by country, 1971-1986
Amount of nickel content

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971-75)	5-year average (1976-80)	5-year average (1981-85)
USSR	158.0	165.0	170.0	175.0	180.0	186.0	119.6	148.4	169.6
Canada	155.2	88.6	125.0	173.7	175.6	138.6	252.5	182.6	143.6
Australia	73.4	81.4	82.9	75.8	82.3	78.2	39.6	78.8	79.2
New Caledonia	78.1	60.1	46.2	58.3	72.4	64.5	129.0	94.0	63.0
Cuba	40.3	37.6	39.3	33.2	33.6	35.1	35.9	35.8	36.8
Indonesia	36.9	39.4	30.7	25.6	22.9	27.5	20.7	32.4	31.1
South Africa	26.4	22.0	20.5	25.0	25.0	25.0	17.3	25.8	23.8
Dominican Republic	19.0	5.7	20.2	24.3	25.4	22.1	20.0	21.1	23.3
Botswana	18.3	17.8	18.2	18.6	19.6	20.6	1.8	14.5	18.5
Brazil	6.6	14.5	15.6	23.5	16.5	23.0	3.5	4.4	15.3
Greece	10.9	4.8	13.0	16.7	17.0	14.7	13.1	13.9	12.5
Philippines	21.5	11.2	6.1	3.5	14.8	12.7	2.1	25.7	11.4
Zimbabwe	13.0	13.3	10.1	10.3	9.9	8.7	10.0	15.3	11.3
Finland	6.9	6.3	5.3	6.3	7.9	11.3	5.8	5.8	6.6
United States	11.0	2.9	0.0	13.2	5.6	1.1	15.6	13.4	6.5
German Democratic Republic	2.7	2.5	2.2	2.0	2.0	1.7	2.1	2.6	2.3
Norway	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5
Poland	1.0	0.7	0.3	0.0	0.0	0.0	1.6	1.3	0.4
Guatemala	0.0	0.0	0.0	0.0	0.3	0.3	0.0	2.9	0.1
Morocco	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.1
Burma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mexico	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Republic of Korea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
World Total	688.4	583.4	615.1	695.4	721.3	681.9	697.1	727.3	660.7

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Table 4. Production of cobalt ores and concentrates, by country, 1971-1986
Amount of cobalt content

(metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971-75)	5-year average (1976-80)	5-year average (1981-85)
Zaire	11 159	5 608	11 300	18 000	20 000	16 386	14 760	12 506	13 213
Zambia	2 569	2 444	2 407	3 472	4 190	4 344	1 974	2 293	3 016
Australia	3 513	3 075	2 833	1 952	2 602	2 673	459	2 693	2 795
USSR	2 200	2 300	2 400	2 600	2 700	2 800	1 738	1 950	2 440
Canada	2 080	1 274	1 410	2 123	2 676	2 292	1 583	1 567	1 913
Cuba	1 710	1 500	1 620	1 400	1 420	1 406	1 616	1 498	1 530
Finland	940	1 038	930	860	720	630	1 763	1 152	898
Philippines	997	466	165	64	911	90	57	1 094	521
Morocco	689	697	0	0	0	328	1 543	845	277
Botswana	254	254	223	259	222	250	40	213	242
Zimbabwe	94	98	73	77	91	107	22	67	87
World Total	26 205	18 754	23 361	30 807	35 532	31 306	25 529	25 878	26 932

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Table 5. Production of manganese ores and concentrates, by country, 1971-1986
Amount of manganese content

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971-75)	5-year average (1976-80)	5-year average (1981-85)
USSR	2 760.8	2 957.4	2 975.6	2 994.4	2 927.6	2 831.0	2 774.4	3 008.4	2 923.2
Brazil	1 393.0	2 225.0	1 898.0	2 457.0	2 320.0	1 079.6	1 187.8	1 250.9	2 058.6
South Africa	1 959.9	2 175.2	1 203.8	1 271.7	1 501.6	1 554.5	1 777.2	2 134.4	1 622.4
Gabon	758.6	771.3	947.1	1 077.6	1 199.2	1 056.6	1 025.8	1 050.5	950.8
Australia	717.2	587.9	684.0	864.0	970.0	851.0	602.4	783.4	764.6
India	574.5	559.1	490.0	439.4	481.9	495.3	599.5	646.1	509.0
China	480.0	480.0	480.0	480.0	480.0	480.0	340.0	398.0	480.0
Mexico	208.2	183.1	133.0	180.9	150.6	174.4	126.6	173.0	171.2
Ghana	107.1	76.8	83.1	137.6	151.5	111.2	182.8	137.3	111.2
Morocco	56.2	49.5	37.7	30.3	22.4	23.3	66.3	63.9	39.2
Hungary	20.0	25.0	17.6	20.1	19.6	19.1	30.6	25.9	20.4
Japan	21.0	19.9	19.9	16.7	5.6	1.5	58.7	28.5	16.6
Bulgaria	13.2	13.2	13.1	13.0	11.3	11.2	10.1	12.1	12.8
Yugoslavia	10.9	9.6	11.1	6.7	11.1	14.4	4.9	9.2	9.9
Chile	8.6	5.2	8.5	8.5	11.8	11.0	8.3	8.1	8.5
United States	22.1	3.6	3.3	10.0	2.3	1.5	22.7	27.2	8.3
Indonesia	1.3	9.3	4.3	4.7	4.0	5.4	6.8	3.3	4.7
Zaire	9.2	0.0	0.0	8.1	2.4	1.6	174.1	23.9	3.9
Turkey	4.1	1.9	0.7	9.2	3.0	3.3	5.2	13.9	3.8
Thailand	3.8	2.7	2.3	3.0	1.5	1.7	8.9	20.2	2.7
Greece	2.9	2.8	2.3	2.7	2.7	2.1	3.4	3.5	2.7
Italy	2.6	2.6	2.2	2.9	2.6	1.6	5.4	2.3	2.6
Iran (Islamic Republic of)	0.0	0.0	0.0	4.3	3.6	2.9	10.1	8.6	1.6
Argentina	0.5	0.8	1.5	1.4	1.7	2.5	5.7	6.5	1.2
Philippines	1.8	0.8	1.2	0.3	0.3	0.5	1.2	3.5	0.9
Sudan	0.4	0.4	0.0	0.0	0.0	0.0	n.a.	0.2	0.2
Peru	0.0	0.0	0.0	0.3	0.3	0.2	n.a.	0.0	0.1
Pakistan	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Vanuatu	0.0	0.0	0.0	0.0	0.0	1.4	16.6	9.2	0.0
Egypt	0.0	0.0	0.0	0.0	0.0	0.6	1.5	1.2	0.0
Czechoslovakia	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
World Total	9 138.2	10 163.2	9 820.2	10 044.9	10 288.7	8 739.5	8 923.1	9 855.4	9 731.0

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Table 6. Production of ferromanganese, by country, 1971–1986 Amount of ferromanganese content

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971–75)	5-year average (1976–80)	5-year average (1981–85)
USSR	603.0	592.0	624.0	625.0	593.0	621.0	979.6	596.3	607.4
Japan	595.0	562.0	407.0	507.0	468.0	397.0	605.4	592.8	507.8
Germany, Federal Republic of	214.0	555.0	174.0	465.0	388.0	425.0	240.6	207.4	359.2
France	313.0	332.0	270.0	329.0	336.0	276.0	483.0	413.2	316.0
Norway	233.0	224.0	283.0	285.0	268.0	251.3	272.8	329.0	258.6
Canada	282.0	218.0	178.0	201.0	227.0	219.0	206.2	224.4	221.2
India	206.0	158.0	154.0	122.0	163.0	133.2	194.8	187.0	160.6
United States	175.0	108.0	71.0	155.0	139.0	65.1	610.2	289.6	129.6
Brazil	108.0	121.0	103.0	106.0	135.0	164.0	77.4	124.0	114.6
Spain	60.0	85.0	109.0	114.0	120.0	92.3	99.4	151.4	97.6
Poland	110.0	92.0	86.0	92.0	101.0	97.0	136.8	130.8	96.2
United Kingdom	84.0	61.0	82.0	75.0	77.0	100.0	128.4	95.4	75.8
Dem. People's Republic of Korea	70.0	70.0	70.0	70.0	70.0	73.2	40.0	60.0	70.0
Australia	68.0	55.0	53.0	75.0	60.0	55.6	47.0	79.2	62.2
Bulgaria	55.0	55.0	47.0	39.0	43.0	46.0	45.4	50.8	47.8
Portugal	65.0	27.0	34.0	30.0	29.0	20.5	0.0	67.4	37.0
Argentina	22.0	24.0	25.0	24.0	21.0	21.1	26.2	27.0	23.2
Chile	5.0	3.0	5.0	5.0	6.0	6.0	6.0	5.4	4.8
Zimbabwe	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Venezuela	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.6	2.0
German Democratic Republic	2.0	2.0	0.0	2.0	0.0	0.0	2.3	0.8	1.2
Italy	1.0	1.0	1.0	1.0	1.0	1.0	4.0	4.0	1.0
Belgium/Luxembourg	0.0	0.0	0.0	0.0	0.0	35.1	118.8	30.4	0.0
Czechoslovakia	0.0	0.0	0.0	0.0	0.0	0.0	27.2	0.2	0.0
Hungary	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	0.0
Sweden	0.0	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.0	n.a.	n.a.
Republic of Korea	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.5	n.a.	n.a.
World Total	3 275.0	3 349.0	2 780.0	3 326.0	3 249.0	3 047.1	4 308.0	3 549.8	3 195.8

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Table 7. Consumption of refined copper, by country, 1971-1986
Amount of copper content
(continued)

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971-75)	5-year average (1976-80)	5-year average (1981-85)
Indonesia	14.7	17.5	16.7	17.5	16.1	17.9	n.a.	3.4	16.5
Austria	11.9	19.3	13.1	21.8	14.8	18.9	40.9	21.9	16.2
Malaysia	0.5	1.2	17.9	18.0	20.5	8.8	n.a.	0.1	11.6
Thailand	5.5	5.4	10.4	14.3	16.8	21.0	n.a.	3.9	10.5
Egypt	11.7	8.1	9.0	9.0	9.2	10.0	n.a.	5.9	9.4
Switzerland	13.3	7.8	6.8	8.1	9.0	13.6	30.4	19.2	9.0
Norway	6.3	6.4	9.0	10.0	13.0	11.0	5.3	6.1	8.9
Iran (Islamic Republic of)	3.2	5.8	10.0	10.0	15.0	18.0	n.a.	5.1	8.8
Albania	7.5	8.0	9.0	9.0	9.5	10.0	3.5	5.9	8.6
Other Asia	6.6	11.6	7.1	5.3	1.7	3.5	13.8	4.0	6.5
Zimbabwe	6.0	6.0	8.0	6.0	6.0	7.7	n.a.	7.4	6.4
Philippines	5.1	0.0	5.0	12.0	4.9	9.8	n.a.	4.4	5.4
Other America	3.0	2.7	4.5	5.7	4.0	1.7	3.2	5.9	4.0
Venezuela	3.5	2.7	2.2	5.0	6.4	10.7	n.a.	4.3	4.0
Zambia	2.0	2.8	1.1	5.9	6.6	8.3	n.a.	2.1	3.7
Other Africa	3.9	2.6	5.4	1.3	0.2	0.3	20.8	7.7	2.7
Zaire	1.4	2.9	1.8	3.3	2.7	2.5	n.a.	2.6	2.4
Cuba	1.2	1.5	2.0	2.0	2.5	2.5	1.0	1.0	1.8
New Zealand	1.7	0.7	0.5	2.7	2.1	2.0	1.4	2.0	1.5
Denmark	1.2	1.3	1.3	1.4	0.0	0.0	4.6	4.3	1.0
Viet Nam	1.0	1.0	1.0	1.0	1.0	1.0	0.2	1.0	1.0
Saudi Arabia	0.1	0.1	0.1	0.0	4.1	9.3	n.a.	0.1	0.9
Ireland	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.1
Other Oceania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
World Total	9 750.3	9 118.6	9 309.6	9 854.4	9 858.0	10 082.8	7 947.4	9 256.8	9 578.2

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Table 8. Consumption of refined nickel, by country, 1971–1986
Amount of nickel content

(Thousands of metric tons)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1971–75)	5-year average (1976–80)	5-year average (1981–85)
USSR	130.0	138.0	145.0	147.0	147.0	146.0	105.0	126.7	141.4
United States	139.7	125.2	136.9	141.0	143.1	142.0	159.9	149.2	137.2
Japan	106.4	108.4	118.1	144.6	136.1	126.6	98.2	113.4	122.7
Germany, Federal Republic of	62.0	57.8	63.0	78.0	75.0	77.3	47.1	64.1	67.2
France	33.6	31.8	32.5	38.9	32.3	31.9	33.1	36.4	33.8
Italy	20.0	24.0	22.5	28.0	29.0	29.5	19.8	24.6	24.7
United Kingdom	22.3	22.5	21.7	26.1	24.8	27.4	30.6	30.2	23.5
China	18.0	18.0	18.0	18.0	18.5	19.0	18.5	18.4	18.1
Sweden	16.3	15.0	16.4	20.4	17.0	17.1	24.5	20.7	17.0
India	9.5	11.0	13.0	15.7	14.0	16.0	2.4	5.7	12.6
Finland	7.1	8.7	9.8	13.2	14.8	13.2	0.4	4.8	10.7
German Democratic Republic	10.0	10.0	9.0	10.0	10.0	11.0	8.5	10.6	9.8
Czechoslovakia	9.6	7.9	10.2	9.6	10.6	11.0	7.7	10.1	9.6
Brazil	9.8	7.1	7.1	10.3	11.5	13.4	3.6	7.1	9.2
Canada	8.6	6.6	8.0	9.1	8.6	9.6	11.5	9.8	8.2
Spain	7.1	7.9	8.3	9.3	8.2	13.7	4.8	8.2	8.2
Romania	6.0	7.0	7.0	8.5	10.9	10.0	3.8	6.3	7.9
Poland	7.0	6.5	7.0	7.5	8.0	8.0	6.1	8.3	7.2
South Africa	4.0	4.0	6.0	8.0	9.0	8.5	n.a.	4.2	6.2
Belgium/Luxembourg	3.8	3.9	5.3	6.0	6.6	6.8	3.4	3.6	5.1
Austria	4.4	4.5	4.0	5.5	5.5	5.3	4.3	5.1	4.8
Taiwan	3.0	2.8	4.3	6.1	5.6	14.8	n.a.	1.6	4.4
Mexico	4.0	4.3	1.2	3.6	3.4	1.4	1.3	3.6	3.3
Republic of Korea	3.9	2.8	2.6	3.1	3.5	6.6	n.a.	1.3	3.2
Australia	3.5	2.8	2.4	2.9	4.0	4.0	3.9	4.0	3.1
Yugoslavia	2.1	2.0	2.5	3.0	4.8	5.1	1.3	1.9	2.9
Hungary	2.5	2.8	2.8	3.0	3.2	3.5	1.7	2.3	2.9
Other Asia	0.7	0.6	2.9	2.0	2.0	3.5	0.6	0.6	1.6
Bulgaria	1.5	1.6	1.6	1.5	1.5	1.5	0.8	1.3	1.5
Netherlands	0.7	0.9	1.0	1.2	1.5	2.7	1.3	1.3	1.1
Switzerland	1.2	1.0	0.9	0.9	1.2	1.3	1.4	1.5	1.0
Other America	1.0	1.0	1.0	1.0	1.0	1.5	1.5	1.3	1.0
Other Africa	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.9	1.0
Hong Kong	1.6	0.5	0.7	1.5	0.6	2.2	n.a.	0.9	1.0
Argentina	0.4	0.4	0.7	0.9	0.9	0.9	n.a.	0.8	0.7

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Table 9. Exports of copper ores and concentrates, copper matte and cement copper by country, 1976–1986
F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Papua New Guinea	434 011	402 729	n.a.	n.a.	n.a.	n.a.	n.a.	418 370
Canada	362 133	260 441	327 442	327 352	340 256	355 659	335 161	323 525
Philippines	429 638	312 760	250 239	115 719	84 639	89 869	354 530	238 599
Mexico	271 508	185 427	160 815	125 248	117 031	n.a.	44 647	172 006
United States	207 012	211 197	48 061	69 085	140 220	187 826	63 138	135 115
Chile	158 398	5 485	6 335	173 768	285 125	262 605	131 273	125 822
Indonesia	n.a.	n.a.	n.a.	n.a.	114 537	170 799	85 885	114 537
Australia	70 898	68 124	98 967	78 296	92 515	66 379	67 395	81 760
Malaysia	72 456	65 189	70 013	60 439	58 264	53 610	49 166	65 272
South Africa	38 110	25 425	n.a.	n.a.	n.a.	n.a.	24 545	31 768
Peru	15 967	30 717	22 899	28 472	n.a.	n.a.	34 514	24 514
Honduras	n.a.	n.a.	n.a.	25 353	22 038	n.a.	n.a.	23 696
Norway	28 542	21 591	25 619	19 287	20 789	29 645	23 826	23 166
Morocco	11 105	21 810	26 958	22 251	21 384	21 016	8 007	20 702
Sweden	13 253	15 175	10 265	19 742	31 256	27 899	8 682	17 938
Spain	21 694	12 889	6 067	16 718	17 339	17 426	854	14 941
Brazil	16 373	262	106	8 178	180	n.a.	391	5 020
Israel	5 705	4 543	4 461	1 414	n.a.	n.a.	12	4 031
Yugoslavia	237	n.a.	1 039	636	13 822	9 372	2 255	3 934
Bolivia	4 430	3 126	2 978	1 838	1 709	n.a.	4 152	2 816
Finland	33	4 292	6 688	48	n.a.	n.a.	53	2 765
Germany, Federal Republic of	143	90	11 060	2 286	156	376	284	2 747
France	1 470	3 732	2 761	2 627	1 222	1 760	2 124	2 362
Italy	1 814	347	2 284	3 481	1 382	322	1 593	1 862
Ireland	5 623	1 669	47	1	n.a.	21	5 681	1 835
Belgium	1 347	1 041	1 150	1 384	1 264	1 081	1 417	1 237
Cyprus	n.a.	993	614	1 555	618	408	3 738	945
Netherlands	n.a.	21	n.a.	2 670	11	95	29	901
Colombia	1 916	347	254	277	45	2 269	1 339	568
Liberia	525	n.a.	n.a.	n.a.	n.a.	n.a.	118	525
United Kingdom	13	433	261	820	871	710	390	480
Ecuador	475	n.a.	n.a.	n.a.	n.a.	n.a.	1 250	475
Greece	7	1	n.a.	798	784	868	30	398
Algeria	577	288	425	n.a.	211	n.a.	347	375
Portugal	19	n.a.	845	371	105	219	426	335

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Table 9. Exports of copper ores and concentrates, copper matte and cement copper by country, 1976–1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Switzerland	632	n.a.	n.a.	92	1	n.a.	177	242
Congo	n.a.	n.a.	n.a.	n.a.	177	n.a.	94	177
New Caledonia	184	248	92	n.a.	n.a.	n.a.	147	175
Saudi Arabia	306	27	n.a.	n.a.	n.a.	n.a.	1 288	167
Panama	n.a.	n.a.	n.a.	n.a.	125	n.a.	n.a.	125
French Polynesia	60	23	70	n.a.	n.a.	n.a.	111	51
Guatemala	n.a.	67	2	72	n.a.	n.a.	n.a.	47
Singapore	63	10	41	12	32	n.a.	3	32
Cote d'Ivoire	n.a.	n.a.	25	n.a.	n.a.	n.a.	n.a.	25
Bahrain	23	n.a.	n.a.	n.a.	n.a.	n.a.	122	23
Austria	20	n.a.	25	27	20	2	96	23
Pakistan	n.a.	n.a.	n.a.	23	n.a.	n.a.	10	23
New Zealand	n.a.	n.a.	n.a.	16	n.a.	n.a.	141	16
Kenya	n.a.	n.a.	14	n.a.	n.a.	n.a.	29	14
Republic of Korea	n.a.	n.a.	16	n.a.		n.a.	1	9
Trinidad and Tobago	n.a.	1	15	n.a.	n.a.	n.a.	n.a.	8
Tunisia	n.a.	n.a.	8	5	n.a.	n.a.	n.a.	7
Denmark	n.a.	n.a.	3	n.a.	n.a.	n.a.	13	3
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24 368	n.a.
India	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7 267	n.a.
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3 854	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	194	n.a.
Egypt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	95	n.a.
Togo	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	51	n.a.
Senegal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8	n.a.
Dominican Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7	n.a.
Dominica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Japan	n.a.	n.a.	n.a.	n.a.	n.a.	909	n.a.	n.a.
Turkey	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total World Market Economies	1 948 265	1 958 255	1 641 117	1 562 968	1 565 444	1 691 043	1 219 206	1 735 210

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Table 10. Exports of copper waste and scrap, by country, 1976-1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Chile	2 507	283 636	325 057	269 018	235 298	256 702	2 705	223 103
United States	192 655	171 498	173 839	217 834	292 263	278 707	166 257	209 618
France	138 913	151 074	194 819	214 736	282 649	132 749	121 077	196 438
United Kingdom	88 032	108 615	120 818	109 067	116 533	136 785	71 542	108 613
Netherlands	75 284	61 359	69 795	69 751	82 319	67 793	59 624	71 702
Germany, Federal Republic of	71 898	59 148	67 836	77 654	76 824	70 591	58 649	70 672
Canada	53 988	61 214	57 919	57 570	63 437	72 539	44 179	58 826
Belgium	28 768	32 587	29 048	31 998	28 417	27 307	25 465	30 164
Italy	33 267	21 986	22 833	16 222	17 674	13 002	14 808	22 396
Hong Kong	23 735	21 068	23 110	23 243	19 280	22 402	13 579	22 087
Singapore	20 722	17 924	20 778	20 452	24 139	26 692	14 334	20 803
Switzerland	16 607	15 792	23 588	17 605	15 879	13 930	12 069	17 894
Denmark	15 762	12 743	17 229	15 198	15 701	14 199	13 763	15 327
Malaysia	7 837	7 102	10 125	10 474	13 692	15 900	4 088	9 846
Ireland	8 830	8 254	7 972	8 285	6 921	6 626	7 054	8 052
South Africa	3 073	11 631	n.a.	n.a.	n.a.	n.a.	652	7 352
Austria	5 998	4 875	n.a.	n.a.	n.a.	n.a.	2 491	5 437
Yugoslavia	7 562	3 779	6 161	3 850	2 690	1 502	5 582	4 808
Mexico	36	1 970	5 971	6 906	6 788	n.a.	3	4 334
Norway	3 591	2 642	6 269	4 523	2 632	4 941	3 121	3 931
Philippines	1 562	549	2 061	8 119	5 513	2 833	1 571	3 561
Saudi Arabia	2 928	3 568	n.a.	n.a.	n.a.	n.a.	690	3 248
Morocco	2 210	2 062	2 644	2 265	2 394	1 967	1 748	2 315
Algeria	3 041	1 390	2 555	1 196	2 515	3 576	2 224	2 139
Israel	1 940	2 517	2 079	1 703	1 785	1 573	2 399	2 005
Tunisia	1 892	1 100	1 966	2 172	1 618	1 165	604	1 758
Pakistan	n.a.	n.a.	531	2 017	2 030	1 011	n.a.	1 526
Republic of Korea	403	1 066	3 161	1 845	826	631	448	1 460
Cote d'Ivoire	1 494	1 191	1 101	n.a.	1 176	n.a.	971	1 241
Greece	2 168	408	1 834	601	250	89	749	1 052
Sweden	730	1 024	1 220	823	1 286	1 066	792	1 017
Finland	171	122	984	1 386	859	765	274	704
Senegal	692	n.a.	n.a.	n.a.	n.a.	n.a.	729	692
Cyprus	804	430	525	373	618	428	305	558
New Zealand	637	580	590	452	331	237	434	518

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Table 10. Exports of copper waste and scrap, by country, 1976-1986
F.O.B. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Spain	293	143	836	526	688	591	1 180	497
Japan	175	637	530	325	536	5 196	487	441
Cameroon	n.a.	419	n.a.	n.a.	n.a.	68	284	419
Venezuela	522	n.a.	274	n.a.	n.a.	n.a.	236	398
Malta	512	241	454	447	227	142	520	376
Martinique	391	286	403	265	363	286	186	342
Kenya	447	248	199	n.a.	n.a.	n.a.	415	298
Australia	554	389	124	186	96	93	840	270
Bangladesh	n.a.	n.a.	n.a.	243	n.a.	n.a.	n.a.	243
Portugal	15	118	322	205	490	466	68	230
Gabon	258	120	268	n.a.	n.a.	n.a.	25	215
Jordan	7	26	203	205	558	245	n.a.	200
Guadeloupe	243	156	111	171	256	233	78	187
Papua New Guinea	181	136	n.a.	n.a.	n.a.	n.a.	n.a.	159
Trinidad and Tobago	220	100	109	134	192	143	189	151
Jamaica	125	143	n.a.	n.a.	n.a.	n.a.	123	134
Congo	n.a.	n.a.	6	31	336	n.a.	30	124
Reunion	152	83	94	102	110	143	147	108
Madagascar	n.a.	n.a.	n.a.	n.a.	62	49	n.a.	62
Macau	30	31	111	73	54	n.a.	26	60
Fiji	109	96	23	7	n.a.	n.a.	18	59
Barbados	78	11	79	55	28	8	68	50
French Guiana	n.a.	n.a.	n.a.	42	18	n.a.	4	30
Ethiopia	n.a.	n.a.	n.a.	n.a.	29	n.a.	66	29
Greenland	43	33	27	18	24	21	30	29
Malawi	33	3	n.a.	n.a.	n.a.	n.a.	19	18
Argentina	n.a.	17	n.a.	n.a.	n.a.	n.a.	n.a.	17
Seychelles	22	9	18	14	6	n.a.	25	14
Dominican Republic	12	n.a.	n.a.	n.a.	n.a.	n.a.	56	12
Mali	n.a.	3	n.a.	n.a.	n.a.	n.a.	n.a.	3
Cape Verde	n.a.	n.a.	n.a.	3	n.a.	n.a.	n.a.	3
Bolivia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	247	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	173	n.a.
United States Virgin Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	97	n.a.
United Republic of Tanzania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	65	n.a.

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Table 10. Exports of copper waste and scrap, by country, 1976–1986
F.O.B. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Uganda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	50	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	29	n.a.
Peru	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	n.a.
Samoa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26	n.a.
Ecuador	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Burkina Faso	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Egypt	n.a.	n.a.	n.a.	n.a.	n.a.	634	n.a.	n.a.
Total World Market Economies	848 826	1 123 175	1 384 833	1 319 055	1 444 840	1 305 161	685 750	1 224 146

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Table 11. Exports of copper and copper alloys, refined or not, unwrought (including cement copper), by country, 1976–1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Chile	1 539 252	1 218 543	1 295 028	1 126 678	1 224 056	1 257 260	1 448 861	1 280 711
Canada	473 696	364 542	486 592	487 428	384 375	430 668	465 405	439 327
Belgium	538 681	458 157	388 854	312 888	326 870	370 961	523 365	405 090
Poland	253 135	256 022	291 367	258 325	267 040	240 480	308 901	265 178
South Africa	234 521	238 560	n.a.	n.a.	n.a.	n.a.	245 935	232 541
Peru	305 436	364 163	88 822	147 842	n.a.	n.a.	427 030	226 566
Germany, Federal Republic of	172 340	139 158	174 307	126 485	114 784	114 170	211 111	145 415
Sweden	77 257	108 298	179 130	145 351	121 063	108 518	52 232	126 220
Australia	167 442	86 468	143 821	113 744	95 660	96 637	126 244	121 427
Japan	80 714	75 273	295 480	32 776	83 592	129 627	158 335	113 567
Spain	128 212	106 565	119 951	99 435	104 366	94 054	76 857	111 706
United States	72 949	62 283	155 508	157 972	101 562	46 032	121 119	110 055
Philippines	1	n.a.	25 796	113 670	168 014	173 359	12	76 870
United Kingdom	78 119	54 163	52 635	57 993	51 287	47 050	79 054	58 839
Mexico	35 219	35 244	62 747	60 665	35 164	n.a.	11 926	45 808
Norway	51 194	35 586	40 824	46 844	44 480	45 896	42 907	43 786
Finland	48 127	33 360	48 854	36 715	27 370	32 436	32 665	38 885
Austria	42 478	30 499	36 148	29 986	39 699	36 799	29 481	35 762
France	41 144	17 674	42 730	14 712	26 277	23 925	35 210	28 507
Italy	13 789	12 318	18 320	19 731	20 668	13 070	7 132	16 964
Republic of Korea	6 261	16 914	38 683	4 206	5 445	8 806	5 486	14 302
Netherlands	19 538	7 258	7 719	8 858	11 433	7 818	9 330	10 961
Oman	37	n.a.	5 639	16 621	18 993	23 790	n.a.	10 323
Yugoslavia	23 869	12 875	5 863	2 891	4 416	19 154	33 245	9 823
Switzerland	7 282	8 266	9 922	8 200	12 276	9 271	11 815	9 189
Portugal	2 385	4 426	1 225	3 595	6 439	2 646	2 268	3 614
Denmark	1 908	1 412	2 116	4 624	1 909	2 470	1 371	2 394
Turkey	20	n.a.	845	22	7 335	6 046	n.a.	2 056
Singapore	49	312	43	2 359	6 978	11 743	39	1 948
Syrian Arab Republic	1 449	n.a.	708	1 121	n.a.	n.a.	559	1 093
Ireland	666	499	592	786	1 190	936	574	747
Israel	533	620	518	284	466	635	1 038	484
India	793	41	n.a.	n.a.	n.a.	n.a.	27	417
Madagascar	n.a.	n.a.	n.a.	n.a.	241	n.a.	61	241
Brazil	18	53	46	480	247	n.a.	206	167

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Table 11. Exports of copper and copper alloys, refined or not, unwrought (including cement copper), by country, 1976-1986
F.O.B. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Greece	3	101	339	199	19	23	159	132
Malaysia	6	19	36	188	184	n.a.	6	87
Saudi Arabia	156	7	n.a.	n.a.	n.a.	n.a.	61	82
Algeria	n.a.	n.a.	n.a.	n.a.	71	n.a.	n.a.	71
Panama	28	n.a.	n.a.	n.a.	96	n.a.	48	62
Honduras	39	79	n.a.	n.a.	n.a.	n.a.	n.a.	59
New Zealand	13	4	210	17	44	1	222	58
Argentina	22	165	1	n.a.	7	4	3	49
Guatemala	41	22	38	37	n.a.	n.a.	51	35
Thailand	n.a.	n.a.	39	9	n.a.	n.a.	3	24
Kenya	n.a.	n.a.	12	n.a.	n.a.	n.a.	1	12
Togo	12	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12
Uruguay	n.a.	11	n.a.	n.a.	11	n.a.	n.a.	11
Cameroon	n.a.	4	n.a.	n.a.	n.a.	n.a.	21	4
Hong Kong	n.a.	7	1	n.a.	n.a.	n.a.	10	4
Jordan	n.a.	3	n.a.	n.a.	n.a.	n.a.	177	3
Trinidad and Tobago	1	1	1	8	2	5	1	3
Senegal	1	n.a.	n.a.	n.a.	n.a.	n.a.	51	1
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	894 183	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	373 644	n.a.
Uganda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7 078	n.a.
Venezuela	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	899	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	884	n.a.
Tunisia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	130	n.a.
Jamaica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36	n.a.
Macau	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36	n.a.
Colombia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	38	n.a.
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.	1	17	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Nicaragua	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Burkina Faso	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Barbados	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Grenada	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Egypt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total World Market Economies	5 971 276	6 420 075	5 530 075	4 494 490	4 949 598	4 690 714	5 678 178	5 473 103

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Table 12. Exports of copper and copper alloys, worked, by country, 1976-1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Germany, Federal Republic of	1 054 498	983 607	1 039 928	1 144 576	1 151 822	1 345 940	819 459	1 074 902
Japan	556 701	514 992	543 830	501 206	501 664	591 263	423 186	539 679
France	551 263	476 128	501 563	526 855	497 224	538 198	332 884	510 607
Belgium	516 165	459 621	450 393	466 882	505 176	534 252	532 114	479 647
United Kingdom	295 354	273 923	249 122	268 431	301 135	286 952	320 529	277 593
United States	322 802	264 583	232 684	239 380	199 139	209 711	211 912	251 702
Italy	238 730	201 850	215 078	238 874	263 903	303 369	186 480	231 687
Sweden	189 171	164 642	178 505	185 527	176 561	206 452	156 379	178 881
Netherlands	127 033	114 704	118 749	129 381	137 250	154 409	129 371	125 423
Canada	109 703	75 619	90 981	130 434	107 492	99 723	99 464	102 846
Finland	72 225	72 919	81 908	97 157	99 815	126 701	61 758	84 805
Poland	90 128	65 261	76 547	79 342	85 432	97 042	101 963	79 342
Yugoslavia	94 163	88 144	76 257	68 368	61 391	55 839	69 553	77 665
Switzerland	69 435	71 804	76 248	82 593	87 124	106 826	61 011	77 441
Australia	62 263	62 615	51 592	58 661	42 048	24 375	50 879	55 436
Republic of Korea	28 428	44 930	59 259	81 922	58 403	77 286	4 444	54 588
Austria	47 217	46 947	43 826	45 362	43 077	61 382	39 167	45 286
Spain	44 871	40 024	39 441	36 383	37 272	35 346	35 335	39 598
Brazil	23 922	21 814	30 167	59 067	33 777	n.a.	6 307	33 749
Chile	39 032	27 632	23 366	27 465	20 493	24 395	83 299	27 598
Greece	24 906	24 961	28 947	26 075	25 533	38 447	11 895	26 084
Singapore	21 933	28 958	20 303	14 863	11 479	13 278	9 779	19 507
Turkey	232	5 711	23 149	19 904	36 425	43 553	68	17 084
Mexico	7 021	10 698	32 473	19 335	15 246	n.a.	9 895	16 953
Peru	12 496	18 761	13 127	14 321	n.a.	n.a.	14 606	14 676
South Africa	12 968	10 925	n.a.	n.a.	n.a.	n.a.	13 049	11 947
Denmark	21 671	11 202	6 934	7 110	7 522	11 408	17 014	10 888
Norway	9 861	8 487	8 205	9 988	10 690	10 782	8 613	9 446
Israel	8 562	7 031	8 961	11 444	8 367	9 391	5 119	8 873
New Zealand	6 935	5 415	7 181	8 327	7 148	10 076	3 505	7 001
Ireland	8 071	6 835	2 660	8 812	7 719	9 919	7 683	6 819
Portugal	2 843	2 828	2 629	3 324	3 820	6 063	2 245	2 929
Malaysia	1 180	1 385	3 110	4 450	3 221	6 632	723	2 669
Hong Kong	992	1 502	3 027	2 275	2 414	3 911	912	2 058
Philippines	42	15	477	3 618	5 664	8 354	49	1 963

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Table 12. Exports of copper and copper alloys, worked, by country, 1976-1986
(continued)
F.O.B. value

(thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Argentina	2 195	2 407	1 122	890	2 903	4 842	570	1 903
India	1 994	1 712	n.a.	n.a.	n.a.	n.a.	2 613	1 853
Indonesia	608	2 008	1 054	675	553	530	602	980
Venezuela	484	n.a.	229	n.a.	n.a.	n.a.	31	357
Malta	196	199	n.a.	n.a.	n.a.	n.a.	77	198
Guatemala	49	177	389	45	n.a.	n.a.	100	165
Saudi Arabia	66	230	n.a.	n.a.	n.a.	n.a.	583	148
Thailand	83	5	1	66	449	702	26	121
Colombia	105	209	67	23	63	13	101	93
Pakistan	5	30	88	167	n.a.	n.a.	n.a.	73
Cote d'Ivoire	10	5	12	n.a.	235	n.a.	17	66
Tunisia	n.a.	30	94	73	4	n.a.	14	50
Uruguay	60	1	12	78	40	61	2	38
Bangladesh	n.a.	n.a.	n.a.	33	n.a.	5	314	33
Dominican Republic	1	56	n.a.	n.a.	n.a.	n.a.	2	29
Oman	n.a.	71	8	6	n.a.	25	89	28
Trinidad and Tobago	25	45	11	7	5	159	16	19
Cyprus	12	23	6	6	35	13	14	16
Syrian Arab Republic	10	6	7	33	n.a.	n.a.	41	14
Madagascar	32	7	n.a.	13	2	19	3	14
Cameroon	n.a.	13	n.a.	n.a.	n.a.	2	2	13
Kenya	7	25	6	n.a.	n.a.	n.a.	20	13
Jordan	32	2	3	n.a.	1	n.a.	9	10
Macau	11	4	10	15	7	n.a.	1	9
Algeria	n.a.	n.a.	15	n.a.	3	315	n.a.	9
Costa Rica	n.a.	12	n.a.	5	n.a.	n.a.	36	9
Egypt	n.a.	n.a.	n.a.	n.a.	7	670	50	7
New Caledonia	3	5	13	n.a.	n.a.	n.a.	9	7
Reunion	n.a.	12	7	n.a.	1	2	3	7
Morocco	4	11	n.a.	1	10	n.a.	11	7
Congo	n.a.	n.a.	3	13	1	n.a.	n.a.	6
Senegal	5	n.a.	n.a.	n.a.	n.a.	n.a.	3	5
Honduras	1	9	n.a.	n.a.	n.a.	n.a.	n.a.	5
Sri Lanka	2	2	n.a.	10	4	1	5	5
Papua New Guinea	n.a.	4	n.a.	n.a.	n.a.	n.a.	n.a.	4

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Table 12. Exports of copper and copper alloys, worked, by country, 1976-1986 F.O.B. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Guadeloupe	1	2	n.a.	4	5	9	n.a.	3
Mauritius	n.a.	3	n.a.	n.a.	n.a.	n.a.	n.a.	3
El Salvador	1	1	n.a.	n.a.	n.a.	n.a.	275	1
Martinique	n.a.	n.a.	n.a.	1	n.a.	2	6	1
Barbados	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11 710	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	666	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	306	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	104	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	96	n.a.
Jamaica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	72	n.a.
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15	n.a.
Ghana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	10	n.a.
French Polynesia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7	n.a.
Ecuador	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Fiji	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Burkina Faso	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Malawi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
United States Virgin Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Panama	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Togo	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
French Guiana	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.	n.a.
Total World Market Economies	4 614 271	4 126 403	4 214 287	4 652 943	4 486 928	5 007 510	3 744 427	4 418 966

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Table 13. Exports of nickel ores and concentrates, nickel matte, nickel sinters and other intermediate products of nickel metallurgy, by country, 1976–1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Canada	436 980	233 912	263 100	411 126	405 803	325 835	383 645	350 184
Australia	299 998	264 238	167 654	211 206	241 233	212 552	199 099	236 866
Indonesia	150 820	118 916	148 470	140 108	133 306	118 134	77 585	138 324
South Africa	155 940	94 724	n.a.	n.a.	n.a.	n.a.	87 464	125 332
New Caledonia	65 129	54 207	24 322	n.a.	n.a.	n.a.	61 296	47 886
Philippines	70 812	22 065	17 581	15 513	32 758	20 356	28 080	31 586
Netherlands	14 804	14 582	9 891	9 799	7 110	7 369	10 608	11 237
United Kingdom	28 810	9 090	2 760	809	2 157	2 490	5 813	8 723
Germany, Federal Republic of	323	378	20 526	7 793	6 579	6 198	1 979	7 120
Finland	11 272	5 559	943	n.a.	n.a.	n.a.	6 113	5 925
Peru	152	6 957	923	n.a.	n.a.	n.a.	n.a.	2 677
Singapore	6	47	1 581	4 142	7	1 671	31	1 157
Norway	592	1 145	879	719	996	927	1 461	866
Brazil	n.a.	396	n.a.	n.a.	n.a.	n.a.	97	396
Sweden	n.a.	469	454	109	n.a.	n.a.	1 159	344
Italy	139	21	1 225	30	38	1	36	291
Yugoslavia	n.a.	n.a.	n.a.	247	84	n.a.	550	166
Chile	203	215	181	n.a.	4	3	n.a.	151
Ireland	n.a.	295	76	n.a.	4	n.a.	6	125
Turkey	n.a.	n.a.	n.a.	112	n.a.	n.a.	n.a.	112
Mexico	256	12	34	3	132	n.a.	n.a.	87
Switzerland	4	10	40	61	212	113	58	65
France	27	73	28	131	57	223	3 271	63
Japan	222	7	7	4	16	8 317	15	51
Argentina	30	33	n.a.	n.a.	n.a.	n.a.	n.a.	32
Austria	79	2	29	7	27	193	34	29
Belgium	15	58	13	3	n.a.	n.a.	52	22
Cote d'Ivoire	31	n.a.	n.a.	n.a.	5	n.a.	n.a.	18
Portugal	n.a.	n.a.	n.a.	n.a.	13	n.a.	n.a.	13
Spain	7	17	n.a.	n.a.	n.a.	n.a.	154	12
Greece	n.a.	13	9	n.a.	n.a.	n.a.	n.a.	11
Republic of Korea	n.a.	n.a.	n.a.	9	n.a.	n.a.	n.a.	9
Malaysia	n.a.	n.a.	n.a.	8	n.a.	n.a.	n.a.	8
New Zealand	n.a.	n.a.	3	n.a.	n.a.	n.a.	n.a.	3
Cyprus	n.a.	n.a.	n.a.	1	n.a.	n.a.	n.a.	1

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Table 13. Exports of nickel ores and concentrates, nickel matte, nickel sinters and other intermediate products of nickel metallurgy, by country, 1976-1986 F.O.B. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Cuba	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	221 194	n.a.
Madagascar	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5 061	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 162	n.a.
Algeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	652	n.a.
Israel	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	296	n.a.
Burkina Faso	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	127	n.a.
Saudi Arabia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Cameroon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	7	n.a.	n.a.
Total World Market Economies	1 654 070	1 165 372	1 104 570	1 223 786	1 306 641	1 026 725	880 750	1 290 888

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Table 14. Exports of nickel and nickel alloys, unwrought, by country, 1976–1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Canada	487 193	352 150	340 271	370 953	363 610	344 248	442 008	382 835
Norway	247 910	167 808	134 051	188 033	170 919	167 721	169 339	181 744
Australia	146 064	130 663	118 961	124 135	106 155	80 368	50 069	125 196
United States	116 494	178 337	99 097	118 453	86 596	12 542	80 690	119 795
United Kingdom	142 805	77 141	79 991	74 347	66 236	87 670	106 544	88 104
South Africa	91 453	72 559	n.a.	n.a.	n.a.	n.a.	57 532	82 006
Finland	72 072	53 203	51 946	64 568	73 066	64 879	43 649	62 971
New Caledonia	88 008	35 379	14 300	n.a.	n.a.	n.a.	68 052	45 896
Philippines	88 156	26 511	45 967	9 910	52 557	9 051	73 534	44 620
Germany, Federal Republic of	28 161	49 565	61 189	45 262	33 941	34 977	34 918	43 624
France	33 431	23 046	25 216	26 478	30 866	28 651	28 538	27 807
Netherlands	19 739	13 658	9 267	2 029	2 183	2 307	16 226	9 375
Singapore	2 973	4 280	12 084	10 680	3 064	2 552	713	6 616
Japan	9 401	1 955	1 475	2 014	1 934	1 035	13 351	3 356
Sweden	4 362	2 782	2 290	2 741	562	352	4 732	2 547
Belgium	740	3 665	1 883	1 122	1 274	1 501	1 598	1 737
Italy	797	1 191	3 161	536	601	437	922	1 257
Yugoslavia	1 317	137	195	1 764	1 660	n.a.	803	1 015
Brazil	n.a.	n.a.	263	2 022	252	n.a.	62	846
Malaysia	19	323	512	1 202	350	48	73	481
Indonesia	319	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	319
Ireland	512	121	207	410	326	440	176	315
Israel	341	278	116	260	438	270	92	287
Austria	622	45	31	232	369	70	618	260
Switzerland	126	177	173	150	649	296	1 024	255
Greece	n.a.	238	18	n.a.	n.a.	n.a.	24	128
Spain	6	30	123	n.a.	n.a.	65	262	53
Republic of Korea	n.a.	n.a.	5	47	1	n.a.	164	18
Portugal	n.a.	n.a.	17	n.a.	n.a.	n.a.	n.a.	17
New Zealand	n.a.	n.a.	11	n.a.	n.a.	n.a.	n.a.	11
India	4	n.a.	n.a.	n.a.	n.a.	n.a.	19	4
Cameroon	n.a.	2	n.a.	n.a.	n.a.	1	10	2
Denmark	n.a.	n.a.	n.a.	n.a.	1	15	11	1
Turkey	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
Guatemala	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	28 645	n.a.

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Table 14. Exports of nickel and nickel alloys, unwrought, by country, 1976-1986
F.O.B. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Chile	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	23	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21	n.a.
Senegal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Syrian Arab Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Argentina	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Morocco	n.a.	n.a.	n.a.	n.a.	n.a.	6	n.a.	n.a.
Total World Market Economies	1 629 065	1 345 847	1 228 769	1 239 435	1 187 130	1 003 551	1 264 576	1 326 049

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Table 15. Exports of nickel and nickel alloys, worked, by country, 1976–1986
F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Germany, Federal Republic of	108 869	97 939	86 812	108 914	134 456	150 045	107 437	107 398
United States	169 978	96 969	61 582	88 246	99 195	76 709	128 819	103 194
United Kingdom	119 442	81 756	71 753	92 512	102 487	101 043	84 452	93 590
Canada	95 280	66 772	65 567	64 670	72 255	58 653	83 800	72 909
France	41 150	42 359	30 690	34 639	41 140	53 609	45 851	37 996
Japan	9 087	16 194	9 239	18 737	41 177	31 907	12 555	18 887
Sweden	26 418	15 636	15 687	13 660	15 697	18 387	15 922	17 420
Switzerland	9 242	22 480	7 978	9 353	10 883	14 006	11 908	11 987
Philippines	15 157	22 045	7 581	2 372	11 505	5 655	10 726	11 732
Netherlands	8 149	15 204	7 837	2 582	3 091	4 114	6 220	7 373
Italy	4 973	5 293	4 935	5 765	7 608	8 621	4 194	5 715
Austria	4 006	2 390	2 995	4 895	8 529	6 295	3 912	4 563
Belgium	2 883	3 234	2 619	3 042	8 359	4 992	6 490	4 027
South Africa	4 696	2 799	n.a.	n.a.	n.a.	n.a.	3 634	3 748
Ireland	3 610	3 758	2 942	3 889	3 496	4 210	2 999	3 539
Australia	1 935	2 135	69	334	317	700	19 218	958
Singapore	811	363	459	282	1 424	1 751	386	668
Colombia	n.a.	n.a.	n.a.	263	893	n.a.	20	578
Yugoslavia	56	152	568	1 229	820	3	166	565
Finland	138	83	298	1 620	23	8	342	432
Greece	370	260	164	446	510	516	328	350
Brazil	99	526	363	504	196	n.a.	108	338
Chile	n.a.	281	n.a.	n.a.	n.a.	n.a.	2	281
Spain	223	216	118	185	187	352	226	186
Malaysia	116	86	285	343	93	171	106	185
Norway	234	115	133	205	169	226	184	171
Turkey	n.a.	4	n.a.	163	n.a.	4	n.a.	84
Mexico	44	30	106	98	105	n.a.	128	77
Bolivia	49	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	49
Denmark	139	40	27	11	13	108	93	46
Israel	21	1	21	62	115	36	30	44
Republic of Korea	18	12	69	27	56	115	31	36
India	43	22	n.a.	n.a.	n.a.	n.a.	96	33
Indonesia	n.a.	38	n.a.	n.a.	n.a.	n.a.	1	30
Mauritius	46	6	n.a.	n.a.	n.a.	n.a.	n.a.	26

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Table 15. Exports of nickel and nickel alloys, worked, by country, 1976-1986
F.O.B. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Dominican Republic	19	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19
Portugal	15	28	21	25	1	22	48	18
Cote d'Ivoire	27	2	4	n.a.	n.a.	n.a.	3	11
Argentina	10	n.a.	10	6	n.a.	15	5	9
Saudi Arabia	3	13	n.a.	n.a.	n.a.	n.a.	15	8
Algeria	n.a.	n.a.	3	n.a.	n.a.	n.a.	n.a.	3
New Zealand	2	n.a.	n.a.	n.a.	n.a.	n.a.	149	2
Kenya	n.a.	2	1	n.a.	n.a.	n.a.	n.a.	2
Venezuela	1	n.a.	n.a.	n.a.	n.a.	n.a.	97	1
Syrian Arab Republic	1	n.a.	n.a.	n.a.	n.a.	n.a.	5	1
Barbados	n.a.	n.a.	n.a.	1	n.a.	n.a.	n.a.	1
Guatemala	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2 839	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	n.a.
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27	n.a.
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	13	n.a.
Peru	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Egypt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Senegal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Morocco	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Honduras	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Cameroon	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.
Thailand	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.	n.a.
Total World Market Economies	699 472	507 567	393 400	471 465	579 486	549 363	584 848	530 278

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Table 16. Exports of manganese ores and concentrates, by country, 1976–1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
South Africa	131 394	122 073	n.a.	n.a.	n.a.	n.a.	119 500	126 734
Gabon	89 790	79 949	103 066	n.a.	n.a.	n.a.	119 420	90 935
Brazil	58 292	54 925	35 698	37 027	36 432	n.a.	41 796	44 475
India	12 190	11 818	n.a.	n.a.	n.a.	n.a.	16 823	12 004
Mexico	15 567	11 376	9 700	10 695	9 821	n.a.	11 786	11 432
Netherlands	9 954	10 560	10 946	11 149	12 170	12 323	8 082	10 956
Thailand	19 154	10 126	n.a.	281	n.a.	1 681	4 093	9 854
Singapore	9 064	6 704	10 496	8 974	7 867	8 518	4 561	8 621
Morocco	12 091	10 081	6 855	8 022	6 055	7 853	13 191	8 621
Ghana	7 920	5 465	n.a.	n.a.	n.a.	n.a.	13 843	6 693
United States	6 578	2 602	2 167	15 727	4 391	3 366	8 392	6 293
Indonesia	9 373	12 235	831	646	994	195	1 224	4 816
Australia	178	8 489	n.a.	n.a.	n.a.	n.a.	61	4 334
France	1 646	1 573	2 305	4 446	3 994	4 673	1 513	2 793
United Kingdom	2 308	2 384	456	288	259	291	1 894	1 139
Belgium	1 136	1 653	300	1 483	337	77	1 301	982
Portugal	1 048	95	935	n.a.	n.a.	n.a.	1 165	693
Japan	299	474	670	1 013	570	506	1 209	605
Germany, Federal Republic of	560	313	435	188	383	449	503	376
Norway	517	1	198	1	n.a.	46	276	179
Yugoslavia	54	120	169	206	330	201	80	176
Greece	261	53	245	62	n.a.	17	177	155
Turkey	n.a.	n.a.	n.a.	n.a.	152	60	267	152
Italy	95	69	44	192	61	107	57	92
Cote d'Ivoire	1	n.a.	n.a.	n.a.	182	n.a.	n.a.	92
Philippines	129	n.a.	46	n.a.	n.a.	16	360	88
Malaysia	58	57	n.a.	n.a.	n.a.	n.a.	363	58
Spain	171	19	13	4	n.a.	n.a.	24	52
Sweden	55	9	98	n.a.	11	n.a.	94	43
Egypt	n.a.	n.a.	n.a.	13	n.a.	n.a.	n.a.	13
Bolivia	n.a.	5	2	n.a.	n.a.	n.a.	81	4
Argentina	2	3	n.a.	n.a.	n.a.	n.a.	47	3
Finland	n.a.	n.a.	2	n.a.	n.a.	n.a.	n.a.	2
Burkina Faso	n.a.	1	n.a.	n.a.	n.a.	n.a.	n.a.	1
Congo	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9 000	n.a.

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Table 16. Exports of manganese ores and concentrates, by country, 1976-1986
F.O.B. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Niger	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4 103	n.a.
Vanuatu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	113	n.a.
Colombia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	75	n.a.
Pakistan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	68	n.a.
Austria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	63	n.a.
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	25	n.a.
Chile	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15	n.a.
Ireland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15	n.a.
Peru	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Total World Market Economies	400 630	371 540	466 523	482 272	417 917	315 562	420 868	427 776

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Table 17. Exports of ferromanganese, by country, 1976-1986 F.O.B. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
South Africa	142 730	81 469	n.a.	n.a.	n.a.	n.a.	108 521	112 100
France	152 175	69 363	86 341	101 634	80 882	257 215	117 335	98 079
Norway	83 876	72 446	68 405	73 835	64 906	73 552	104 481	72 694
Germany, Federal Republic of	21 710	16 876	21 624	41 419	28 475	36 578	24 611	26 021
Spain	19 613	14 387	10 154	13 215	14 287	13 694	19 474	14 331
Japan	19 483	13 613	12 192	12 618	11 587	4 462	32 340	13 899
Mexico	7 485	6 283	15 891	12 982	17 708	n.a.	6 083	12 070
Brazil	12 223	8 110	11 890	6 565	9 813	n.a.	10 552	9 720
Canada	21 208	3 766	1 515	2 389	12 373	12 208	4 495	8 250
United States	12 477	7 074	5 765	4 389	4 762	2 650	7 706	6 893
Portugal	9 247	3 616	2 675	11 398	4 903	6 704	16 985	6 368
Australia	5 347	5 292	6 375	5 192	4 509	10 661	4 782	5 343
Belgium	4 511	4 518	4 182	7 021	6 476	7 011	17 748	5 342
United Kingdom	5 973	6 911	3 365	299	5 451	4 190	822	4 400
Yugoslavia	8 214	4 365	2 938	3 524	2 368	1 884	5 479	4 282
Italy	504	1 265	848	217	566	441	2 903	680
Sweden	570	n.a.	n.a.	n.a.	n.a.	n.a.	742	570
Netherlands	786	75	25	182	56	73	476	225
Republic of Korea	n.a.	n.a.	228	123	11	4	1 444	121
Chile	40	n.a.	n.a.	36	172	77	223	83
Singapore	18	30	31	33	229	153	20	68
Ireland	28	1	110	83	72	14	52	59
Malaysia	4	1	144	3	2	n.a.	4	31
Philippines	n.a.	n.a.	24	28	n.a.	n.a.	n.a.	26
Finland	n.a.	n.a.	5	n.a.	n.a.	n.a.	17	5
Austria	3	n.a.	n.a.	n.a.	n.a.	n.a.	16	3
Sri Lanka	n.a.	1	n.a.	n.a.	n.a.	n.a.	n.a.	1
Cote d'Ivoire	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
Turkey	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
India	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3 257	n.a.
Thailand	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	128	n.a.
Venezuela	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	31	n.a.
Saudi Arabia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	20	n.a.
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9	n.a.
Syrian Arab Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Greece	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.
Madagascar	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.
Total World Market Economies	535 613	325 743	360 119	408 322	358 877	526 213	477 468	397 735

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Table 18. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1976-1986 C.I.F. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Japan	1 676 341	1 418 956	1 478 354	1 256 884	1 209 724	1 227 549	1 247 003	1 407 892
Germany, Federal Republic of	283 114	254 971	254 278	231 121	212 358	259 702	260 522	247 168
Republic of Korea	207 635	168 560	183 078	165 263	163 261	193 444	61 751	177 559
United States	111 457	186 821	158 156	47 061	3 281	3 424	67 527	101 339
Mexico	220 152	35 205	23 732	37 694	102 649	n.a.	31 725	83 886
Spain	105 606	59 546	54 999	46 108	39 821	82 187	100 061	61 216
Sweden	51 560	49 189	63 236	23 428	38 025	33 098	23 468	45 088
Brazil	n.a.	3 662	39 082	31 354	64 771	92 844	n.a.	34 717
Finland	21 544	23 203	32 543	40 178	37 289	48 139	6 012	30 951
Canada	18 492	11 112	31 487	23 288	44 161	46 680	6 973	25 708
Belgium	29 683	26 593	20 362	6 486	10 494	11 380	5 579	18 724
Greece	6 549	13 235	23 670	19 729	13 881	18 659	1	15 413
India	9 437	n.a.	n.a.	n.a.	n.a.	n.a.	3 833	9 437
Turkey	15 568	316	5 923	8 725	13 426	16 327	5 557	8 792
Czechoslovakia	n.a.	6 214	6 634	3 568	n.a.	5 747	n.a.	5 472
Yugoslavia	5 754	5 004	n.a.	7	n.a.	n.a.	12 219	3 588
Norway	12	370	6 319	3 664	3 084	520	57	2 690
Portugal	4 289	3 139	264	808	907	54	1 563	1 881
Australia	7 379	1	100	205	565	241	53	1 650
Italy	334	1 262	4 149	594	636	204	360	1 395
Guatemala	n.a.	843	1 427	715	n.a.	n.a.	n.a.	995
South Africa	981	n.a.	n.a.	n.a.	n.a.	n.a.	1 278	981
Egypt	n.a.	1 685	153	738	n.a.	1 805	2 322	859
Netherlands	53	233	3 103	282	392	630	128	813
Thailand	307	5	214	1 267	2 105	216	16	780
United Kingdom	749	386	478	1 521	661	15	1 207	759
Bahrain	582	53	n.a.	n.a.	n.a.	n.a.	37	318
France	27	120	171	457	321	1 558	1 153	219
Honduras	120	n.a.	n.a.	275	252	n.a.	4	216
Chile	1	n.a.	480	n.a.	8	n.a.	20	163
Ecuador	n.a.	n.a.	n.a.	124	n.a.	n.a.	7	124
Nepal	n.a.	n.a.	71	n.a.	139	n.a.	n.a.	105
Tunisia	109	7	104	60	100	170	112	76
Indonesia	110	37	84	26	47	54	38	61
Saudi Arabia	1	108	n.a.	n.a.	n.a.	n.a.	121	55

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Table 18. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1976–1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Malaysia	40	57	118	24	22	136	24	52
Singapore	40	2	65	96	28	47	7	46
Israel	65	19	26	n.a.	37	41	24	37
Pakistan	52	7	38	n.a.	n.a.	2	17	32
Algeria	58	33	34	n.a.	1	n.a.	5	32
United Arab Emirates	29	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	29
Switzerland	22	5	39	10	35	36	145	22
Cote d'Ivoire	32	n.a.	11	n.a.	n.a.	n.a.	14	22
Ethiopia	n.a.	n.a.	n.a.	16	n.a.	n.a.	36	16
Argentina	15	n.a.	n.a.	n.a.	n.a.	n.a.	610	15
Austria	24	13	6	17	n.a.	n.a.	29	15
Venezuela	n.a.	12	n.a.	n.a.	17	n.a.	8	15
Kenya	12	n.a.	n.a.	n.a.	n.a.	n.a.	3	12
Colombia	9	n.a.	n.a.	n.a.	n.a.	741	11	9
Sri Lanka	11	n.a.	n.a.	6	1	n.a.	14	6
Philippines	6	6	n.a.	n.a.	n.a.	n.a.	4	6
Peru	n.a.	n.a.	6	n.a.	n.a.	n.a.	n.a.	6
Ireland	2	4	1	13	5	1	17	5
New Zealand	n.a.	n.a.	n.a.	5	n.a.	3	5	5
Burkina Faso	n.a.	n.a.	4	n.a.	n.a.	n.a.	3	4
Nicaragua	n.a.	n.a.	n.a.	4	n.a.	n.a.	n.a.	4
Denmark	6	3	4	n.a.	1	n.a.	13	4
New Caledonia	3	5	1	n.a.	n.a.	n.a.	3	3
Dominican Republic	3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3
Madagascar	n.a.	n.a.	3	n.a.	n.a.	n.a.	n.a.	3
Bahamas	n.a.	n.a.	4	1	n.a.	n.a.	1	3
Congo	n.a.	n.a.	n.a.	2	n.a.	n.a.	5	2
Gabon	n.a.	n.a.	2	n.a.	n.a.	n.a.	3	2
Fiji	n.a.	n.a.	n.a.	2	n.a.	n.a.	2	2
Barbados	n.a.	n.a.	2	n.a.	n.a.	n.a.	n.a.	2
Jamaica	n.a.	2	n.a.	n.a.	n.a.	n.a.	n.a.	2
Trinidad and Tobago	n.a.	2	n.a.	n.a.	n.a.	1	n.a.	2
Cyprus	n.a.	n.a.	n.a.	n.a.	2	17	n.a.	2
Macau	1	n.a.	2	n.a.	n.a.	n.a.	1	2
Niger	1	n.a.	n.a.	n.a.	n.a.	n.a.	2	1

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Table 18. Imports of copper ores and concentrates, copper matte and cement copper, by country, 1976–1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Uruguay	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1
Panama	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	169	n.a.
Brunei Darussalam	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	20	n.a.
Yemen	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12	n.a.
French Polynesia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Central African Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Mali	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Senegal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Togo	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Cameroon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Faeroe Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Morocco	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Hong Kong	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Iceland	n.a.	n.a.	n.a.	n.a.	n.a.	25	n.a.	n.a.
Total World Market Economies	2 548 415	2 229 342	2 324 770	1 919 072	1 803 252	1 938 607	1 757 681	2 164 970

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Table 19. Imports of copper waste and scrap, by country, 1976–1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Germany, Federal Republic of	208 811	n.a.	n.a.	n.a.	307 892	277 340	192 699	258 352
Belgium	148 361	140 763	186 580	133 570	194 034	137 816	124 499	160 662
Italy	60 895	67 760	75 711	115 497	123 262	150 883	83 075	88 625
Japan	78 050	70 661	71 773	117 570	97 493	95 827	57 717	87 109
United States	57 050	45 318	84 217	77 223	59 612	72 406	41 297	64 684
Canada	36 840	34 732	61 459	67 464	73 010	62 583	26 853	54 701
Republic of Korea	40 586	52 930	57 131	40 752	36 916	63 570	48 218	45 663
Netherlands	35 436	35 508	35 421	38 920	57 924	54 061	20 540	40 642
Spain	41 869	48 167	35 442	20 144	29 885	25 313	18 246	35 101
France	36 919	29 593	33 576	33 135	38 522	46 365	28 864	34 349
Sweden	8 457	17 028	31 346	29 548	32 101	28 412	5 908	23 696
Austria	13 449	15 487	n.a.	n.a.	n.a.	n.a.	15 303	14 468
United Kingdom	12 855	11 091	12 130	9 611	14 439	10 387	17 200	12 025
Singapore	6 627	6 111	4 893	3 419	3 044	6 213	2 950	4 819
Mexico	3 625	1 821	2 458	4 964	10 239	n.a.	1 279	4 621
Switzerland	4 270	4 033	2 387	3 255	5 498	4 796	4 549	3 889
Hong Kong	1 459	1 552	2 865	6 497	5 503	4 025	2 472	3 575
Denmark	5 895	3 474	1 779	3 601	2 151	4 014	2 166	3 380
Finland	9 646	2 364	999	308	145	75	4 119	2 692
Brazil	2 464	1 951	667	1 246	4 350	11 591	2 480	2 136
Turkey	3 661	4 468	1 481	186	851	1	1 286	2 129
Greece	3 241	3 137	37	578	1	11	257	1 399
Australia	1 444	1 182	957	792	739	867	1 028	1 023
Yugoslavia	143	252	593	625	1 396	211	5	602
Ireland	664	465	304	598	526	88	144	511
United Arab Emirates	618	380	n.a.	n.a.	n.a.	n.a.	875	499
Venezuela	n.a.	n.a.	n.a.	207	769	n.a.	389	488
Saudi Arabia	646	204	n.a.	n.a.	n.a.	n.a.	738	425
Malaysia	242	331	237	320	375	358	55	301
Thailand	754	270	233	85	35	8	907	275
Norway	402	102	35	87	687	12	443	263
Pakistan	n.a.	406	298	127	30	79	n.a.	215
South Africa	318	81	n.a.	n.a.	n.a.	n.a.	218	200
Nepal	n.a.	n.a.	n.a.	146	154	n.a.	n.a.	150
Portugal	118	158	145	49	71	204	394	108

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Table 19. Imports of copper waste and scrap, by country, 1976–1986 C.I.F. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Jordan	59	123	47	193	111	76	n.a.	107
Indonesia	n.a.	55	95	n.a.	115	140	2	88
Chile	n.a.	n.a.	n.a.	n.a.	55	n.a.	102	55
Philippines	43	n.a.	48	n.a.	n.a.	6	51	46
Kenya	82	n.a.	2	n.a.	n.a.	n.a.	5	42
Egypt	n.a.	58	19	69	9	67	1 102	39
Iceland	n.a.	n.a.	n.a.	36	n.a.	n.a.	n.a.	36
Sri Lanka	n.a.	34	10	71	17	33	3	33
Uruguay	26	n.a.	n.a.	n.a.	n.a.	n.a.	30	26
Bangladesh	18	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18
Cyprus	n.a.	5	n.a.	n.a.	30	27	n.a.	18
Argentina	3	3	n.a.	n.a.	46	56	529	17
Algeria	45	n.a.	2	1	n.a.	n.a.	25	16
New Zealand	3	37	2	37	1	n.a.	15	16
Madagascar	n.a.	21	7	n.a.	n.a.	n.a.	n.a.	14
Israel	7	27	12	n.a.	8	62	19	14
Mauritius	11	12	n.a.	n.a.	n.a.	n.a.	11	12
Morocco	3	10	9	5	27	23	2	11
Trinidad and Tobago	4	14	5	7	7	61	11	7
Reunion	n.a.	n.a.	n.a.	7	n.a.	n.a.	n.a.	7
Fiji	n.a.	n.a.	2	n.a.	7	n.a.	17	5
Macau	1	n.a.	n.a.	2	5	n.a.	15	3
Cote d'Ivoire	2	3	n.a.	n.a.	n.a.	n.a.	6	3
Guadeloupe	2	n.a.	n.a.	n.a.	n.a.	n.a.	2	2
Tunisia	n.a.	2	n.a.	n.a.	n.a.	2	n.a.	2
Malta	n.a.	n.a.	1	n.a.	n.a.	n.a.	100	1
Senegal	1	n.a.	n.a.	n.a.	n.a.	n.a.	3	1
United Republic of Tanzania	1	n.a.	n.a.	n.a.	n.a.	n.a.	2	1
Gabon	n.a.	1	n.a.	n.a.	n.a.	n.a.	1	1
Martinique	n.a.	1	n.a.	n.a.	n.a.	n.a.	n.a.	1
Sierra Leone	n.a.	n.a.	1	n.a.	n.a.	n.a.	n.a.	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 452	n.a.
Colombia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17	n.a.
Ecuador	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11	n.a.

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Table 19. Imports of copper waste and scrap, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Malawi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6	n.a.
Barbados	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Dominican Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Congo	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Bolivia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Jamaica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Burkina Faso	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Cameroon	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.	n.a.
Total World Market Economies	881 556	862 609	1 000 124	992 207	1 220 000	1 204 257	745 896	991 299

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Table 20. Imports of copper and copper alloys, refined or not, unwrought, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Germany, Federal Republic of	856 538	813 278	801 774	828 891	828 858	783 555	922 111	825 868
United States	809 770	613 526	906 355	856 378	570 147	806 871	685 180	751 235
Belgium	917 255	751 329	656 039	623 054	683 708	719 896	894 668	726 277
Japan	622 184	592 242	398 424	772 199	553 242	424 201	509 904	587 658
France	722 548	601 108	569 609	510 388	502 205	520 000	617 327	581 172
Italy	576 486	494 407	486 470	466 789	517 175	532 153	581 169	508 265
United Kingdom	505 595	498 425	464 773	445 614	456 485	473 149	653 539	474 178
Brazil	295 866	323 497	92 167	155 584	112 996	159 118	309 397	196 022
India	122 236	n.a.	n.a.	n.a.	n.a.	n.a.	72 303	122 236
Sweden	119 503	123 431	122 767	94 394	95 294	91 039	117 190	111 078
Yugoslavia	126 152	90 999	44 503	48 031	58 624	36 039	61 789	73 662
Spain	84 441	51 008	57 611	63 355	66 319	74 334	75 962	64 547
Republic of Korea	45 147	50 848	61 437	81 145	80 340	153 367	27 091	63 783
Argentina	55 762	63 675	53 536	60 810	42 036	70 759	64 789	55 164
Canada	47 155	43 914	45 909	38 603	29 395	30 930	32 998	40 995
Netherlands	46 821	35 112	42 706	34 368	31 406	34 469	60 264	38 083
Turkey	16 170	10 392	44 486	36 186	51 314	73 848	6 922	31 710
Greece	35 367	26 694	29 366	28 326	32 519	40 291	38 680	30 454
Finland	37 154	28 786	30 649	21 578	33 211	24 202	27 971	30 276
Indonesia	29 237	29 906	28 213	23 996	24 785	27 447	8 404	27 227
Austria	24 555	24 662	19 231	22 472	23 345	20 352	29 967	22 853
Portugal	22 293	20 409	24 062	22 775	21 571	19 030	23 680	22 222
Poland	1 198	1 177	40 939	21 555	28 446	25 154	2 810	18 663
Switzerland	21 213	15 443	15 788	16 334	20 623	26 705	30 489	17 880
Malaysia	86	4 904	29 640	24 689	29 554	11 454	100	17 775
Thailand	11 125	10 115	18 079	22 155	26 928	29 768	8 719	17 680
Mexico	417	156	9 648	30 965	17 378	n.a.	133	11 713
Venezuela	7 076	5 988	3 917	8 417	10 252	n.a.	9 620	7 130
Philippines	12 213	12 588	9 952	245	11	25	9 973	7 002
South Africa	8 215	4 490	n.a.	n.a.	n.a.	n.a.	5 859	6 353
Hong Kong	2 376	2 222	1 790	8 919	8 337	4 528	354	4 729
New Zealand	5 245	3 650	4 349	4 540	3 834	2 282	4 084	4 324
Colombia	5 240	1 752	5 681	4 589	3 969	1 229	4 802	4 246
Australia	7 181	8 605	2 957	98	126	590	531	3 793
Norway	4 175	3 386	2 623	3 174	3 854	4 599	4 377	3 442

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Table 20. Imports of copper and copper alloys, refined or not, unwrought, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Egypt	5 049	3 556	777	2 628	n.a.	1 929	55	3 003
Denmark	4 034	1 655	2 173	2 795	3 481	3 547	8 968	2 828
Algeria	3 998	3 957	912	3 052	1 325	2 524	7 255	2 649
Libyan Arab Jamahiriya	2 833	933	n.a.	n.a.	n.a.	n.a.	1 202	1 883
Singapore	647	799	615	1 567	3 929	8 003	708	1 511
Israel	676	416	1 200	2 867	501	1 228	535	1 132
Bolivia	3 149	n.a.	3	5	n.a.	n.a.	759	1 052
Morocco	873	811	914	1 070	1 118	1 038	303	957
Pakistan	307	1 230	554	391	486	300	1 091	594
Ireland	389	499	236	404	358	364	370	377
Tunisia	347	394	229	584	294	523	124	370
Ecuador	116	539	547	44	n.a.	n.a.	39	312
Nepal	n.a.	n.a.	n.a.	183	216	n.a.	n.a.	200
Peru	277	256	190	20	n.a.	20	43	186
Guatemala	443	149	10	132	n.a.	n.a.	259	184
Honduras	28	n.a.	155	8	433	n.a.	5	156
Saudi Arabia	68	186	n.a.	n.a.	n.a.	n.a.	75	127
Kenya	163	123	2	n.a.	n.a.	n.a.	97	96
United Arab Emirates	88	91	n.a.	n.a.	n.a.	n.a.	96	90
Syrian Arab Republic	118	104	52	54	n.a.	n.a.	760	82
Brunei Darussalam	29	5	218	n.a.	72	n.a.	21	81
Bangladesh	81	200	8	65	6	5	506	72
Cyprus	82	29	33	34	114	64	37	58
Cote d'Ivoire	53	39	113	n.a.	22	n.a.	9	57
Jordan	37	80	1	60	68	79	39	49
Panama	6	135	42	25	19	n.a.	15	45
Sri Lanka	15	23	27	32	91	19	42	38
Dominican Republic	5	22	71	75	15	n.a.	31	38
Papua New Guinea	37	35	n.a.	n.a.	n.a.	n.a.	3	36
Cameroon	n.a.	32	n.a.	n.a.	n.a.	18	4	32
El Salvador	7	9	n.a.	63	n.a.	n.a.	30	26
United Republic of Tanzania	21	n.a.	n.a.	n.a.	n.a.	n.a.	19	21
Jamaica	2	39	n.a.	n.a.	n.a.	n.a.	21	21
Costa Rica	24	9	n.a.	25	n.a.	n.a.	20	19
Uruguay	73	6	12	1	2	14	232	19

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Table 20. Imports of copper and copper alloys, refined or not, unwrought, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Chile	48	1	n.a.	6	18	30	14	18
Malta	1	6	77	4	3	116	27	18
Oman	41	38	3	5	3	142	n.a.	18
French Polynesia	12	20	7	n.a.	n.a.	n.a.	28	13
Nicaragua	6	1	n.a.	31	n.a.	n.a.	8	13
Trinidad and Tobago	15	22	n.a.	2	9	212	51	12
Madagascar	8	n.a.	14	n.a.	n.a.	n.a.	23	11
Mauritius	19	7	6	n.a.	n.a.	n.a.	23	11
Senegal	10	n.a.	n.a.	n.a.	n.a.	n.a.	18	10
Iceland	5	13	12	9	11	16	4	10
Congo	n.a.	n.a.	11	7	11	n.a.	5	10
Reunion	n.a.	n.a.	n.a.	10	6	n.a.	2	8
Gabon	4	13	6	n.a.	n.a.	n.a.	2	8
Ghana	4	9	n.a.	n.a.	n.a.	n.a.	54	7
Barbados	n.a.	n.a.	1	12	n.a.	n.a.	4	7
Faeroe Islands	n.a.	n.a.	n.a.	2	10	23	n.a.	6
Togo	5	n.a.	n.a.	n.a.	n.a.	n.a.	3	5
Fiji	3	5	8	3	4	n.a.	14	5
Niger	3	n.a.	n.a.	n.a.	n.a.	n.a.	3	3
Bermuda	3	n.a.	3	n.a.	n.a.	n.a.	2	3
Martinique	1	2	n.a.	n.a.	2	n.a.	1	2
Liberia	n.a.	1	3	1	n.a.	n.a.	n.a.	2
Macau	2	n.a.	2	1	1	n.a.	6	2
Paraguay	n.a.	n.a.	n.a.	1	n.a.	n.a.	17	1
Bahamas	n.a.	1	1	n.a.	n.a.	n.a.	4	1
Malawi	1	n.a.	1	n.a.	n.a.	n.a.	4	1
Greenland	n.a.	n.a.	1	n.a.	1	n.a.	n.a.	1
Tuvalu	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 534	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	428	n.a.
Afghanistan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	240	n.a.
Sudan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	105	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	104	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	98	n.a.
Yemen	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	39	n.a.
Haiti	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	36	n.a.

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Table 20. Imports of copper and copper alloys, refined or not, unwrought, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	20	n.a.
Burma	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12	n.a.
Ethiopia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9	n.a.
Sierra Leone	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Burundi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Iraq	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
St. Vincent and the Grenadines	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
French Guiana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Mali	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Burkina Faso	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Samoa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Guadeloupe	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.	n.a.
Total World Market Economies	6 301 047	5 300 230	5 064 017	5 314 505	4 911 400	5 162 582	5 963 576	5 378 240

Table 21. Imports of copper and copper alloys, worked, by country, 1976–1986 C.I.F. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
United States	542 804	433 915	502 161	732 948	632 896	642 934	366 124	568 945
Germany, Federal Republic of	455 534	442 202	460 746	504 795	532 583	627 835	419 653	479 172
France	402 905	383 810	365 669	369 423	395 965	433 747	440 276	383 554
Italy	264 231	238 092	272 524	311 675	310 728	361 865	231 878	279 450
United Kingdom	258 169	263 933	251 937	257 850	270 849	301 490	197 340	260 548
Netherlands	194 023	188 909	162 571	183 089	204 767	227 765	221 299	186 672
Switzerland	195 878	166 740	163 565	180 947	200 348	227 666	160 048	181 496
Austria	141 052	115 196	124 357	136 385	147 469	181 651	101 744	132 892
Hong Kong	87 312	107 964	122 859	167 724	136 012	187 958	65 737	124 374
Belgium	103 368	93 012	101 074	109 456	104 343	125 465	109 304	102 251
Spain	116 291	88 311	98 036	85 750	87 986	147 033	68 601	95 275
Sweden	99 562	83 782	83 605	96 331	104 904	113 815	98 666	93 637
Canada	108 525	64 497	91 711	100 412	93 989	104 271	67 393	91 827
Singapore	78 499	75 174	80 427	93 354	69 857	81 311	47 603	79 462
Denmark	69 574	66 210	72 566	81 364	84 804	100 102	79 677	74 904
Norway	77 076	66 768	67 726	59 853	60 473	76 769	66 478	66 379
Saudi Arabia	49 621	66 136	n.a.	n.a.	n.a.	n.a.	26 379	57 879
Algeria	59 662	40 905	51 797	59 916	52 083	47 611	33 542	52 873
Malaysia	58 921	71 653	46 034	38 513	36 126	40 204	30 482	50 249
Republic of Korea	56 490	44 728	46 897	52 100	44 565	76 122	38 715	48 956
Israel	48 322	41 081	45 052	46 259	40 110	43 144	37 176	44 165
India	43 137	n.a.	n.a.	n.a.	n.a.	n.a.	17 051	43 137
Ireland	43 955	40 303	38 992	39 998	45 259	47 036	35 922	41 701
Finland	44 349	37 128	35 604	33 546	44 094	57 268	29 242	38 944
Venezuela	52 966	50 741	29 223	32 083	27 421	n.a.	41 759	38 487
Yugoslavia	23 312	18 462	25 649	42 023	55 754	42 606	15 230	33 040
New Zealand	29 881	31 511	27 743	34 895	37 588	36 473	25 652	32 324
Portugal	42 445	35 335	29 285	23 091	30 237	30 122	26 554	32 079
South Africa	37 324	23 316	n.a.	n.a.	n.a.	n.a.	12 259	30 320
Thailand	31 481	30 399	36 176	31 433	19 674	16 702	24 321	29 833
Australia	29 384	26 617	21 644	32 096	31 556	28 675	17 026	28 259
Japan	16 921	18 712	21 759	43 277	38 345	48 382	12 131	27 803
Colombia	27 477	27 199	25 177	27 157	30 547	27 739	17 156	27 511
Mexico	35 635	19 660	10 495	19 285	38 124	n.a.	8 772	24 640
Egypt	16 418	17 587	25 432	28 112	28 226	21 366	8 171	23 155

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Table 21. Imports of copper and copper alloys, worked, by country, 1976–1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Turkey	18 627	18 116	21 408	21 368	26 122	41 005	10 277	21 128
Indonesia	27 966	27 570	16 822	13 175	13 853	21 513	26 804	19 877
Morocco	17 282	17 278	17 469	17 860	21 890	20 396	15 873	18 356
United Arab Emirates	20 667	15 283	n.a.	n.a.	n.a.	n.a.	13 221	17 975
Syrian Arab Republic	21 192	16 713	16 937	12 274	n.a.	n.a.	10 175	16 779
Pakistan	16 253	12 853	13 601	16 319	15 373	18 134	8 083	14 880
Brazil	18 202	15 856	11 421	8 379	9 696	14 295	10 908	12 711
Tunisia	11 192	12 037	11 839	16 239	11 405	14 042	7 665	12 542
Libyan Arab Jamahiriya	11 682	12 713	n.a.	n.a.	n.a.	n.a.	3 929	12 198
Philippines	11 800	12 653	12 067	6 376	6 456	7 926	11 008	9 870
Greece	9 248	4 933	8 639	7 650	15 871	11 968	3 729	9 268
Bangladesh	12 044	4 297	5 774	9 020	7 251	6 923	4 935	7 677
Ecuador	5 904	8 051	6 174	8 755	n.a.	n.a.	5 151	7 221
Poland	5 414	5 348	5 124	5 356	5 119	2 966	19 190	5 272
Argentina	5 907	3 079	4 561	4 191	4 127	5 809	4 099	4 373
Costa Rica	4 216	2 104	n.a.	4 352	n.a.	n.a.	4 540	3 557
Sri Lanka	3 398	2 725	3 564	3 199	3 231	4 272	2 645	3 223
Uruguay	6 156	2 980	2 082	2 331	2 522	3 759	5 509	3 214
Trinidad and Tobago	2 120	3 479	3 468	3 497	2 711	2 030	2 210	3 055
Dominican Republic	3 190	3 922	3 285	2 352	2 228	n.a.	3 144	2 995
El Salvador	3 750	2 215	n.a.	2 600	n.a.	n.a.	3 865	2 855
Jamaica	2 459	3 100	n.a.	n.a.	n.a.	n.a.	1 981	2 780
Peru	3 639	3 091	1 932	1 911	n.a.	2 418	3 033	2 643
Qatar	2 313	2 628	n.a.	n.a.	n.a.	n.a.	671	2 471
Cote d'Ivoire	2 833	2 510	1 928	n.a.	2 172	n.a.	3 282	2 361
Kenya	2 765	2 386	1 467	n.a.	n.a.	n.a.	2 636	2 206
Cyprus	1 787	2 465	2 135	2 153	2 478	3 164	1 216	2 204
Panama	2 033	1 801	2 259	1 950	2 075	n.a.	1 353	2 024
Jordan	976	1 280	1 839	2 547	2 892	2 317	1 005	1 907
Malta	3 048	2 557	1 347	1 124	1 068	1 479	1 629	1 829
Chile	4 053	1 219	726	1 071	1 072	1 640	1 045	1 628
United Republic of Tanzania	1 487	n.a.	n.a.	n.a.	n.a.	n.a.	1 075	1 487
Honduras	1 180	1 081	1 273	1 421	1 653	n.a.	587	1 322
Cameroon	n.a.	1 304	n.a.	n.a.	n.a.	1 853	801	1 304
Ghana	1 898	571	n.a.	n.a.	n.a.	n.a.	2 594	1 235

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Table 21. Imports of copper and copper alloys, worked, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Brunei Darussalam	1 306	1 435	1 285	836	1 220	n.a.	778	1 216
Oman	1 194	784	823	1 232	1 464	1 904	549	1 099
Nepal	n.a.	n.a.	1 569	716	675	n.a.	n.a.	987
Paraguay	574	1 152	1 166	898	990	693	354	956
Bolivia	1 307	891	938	686	n.a.	n.a.	920	956
Iceland	1 034	974	865	942	934	1 222	816	950
Guatemala	1 388	793	759	666	n.a.	n.a.	1 302	902
Sudan	766	n.a.	n.a.	n.a.	n.a.	n.a.	309	766
Reunion	782	578	740	811	904	1 143	426	763
Papua New Guinea	772	528	n.a.	n.a.	n.a.	n.a.	318	650
Ethiopia	354	826	n.a.	765	417	n.a.	275	591
Barbados	496	542	401	482	592	495	446	503
French Polynesia	538	531	361	n.a.	n.a.	n.a.	282	477
Nicaragua	579	503	n.a.	239	n.a.	n.a.	336	440
Senegal	434	n.a.	n.a.	n.a.	n.a.	n.a.	406	434
Gabon	366	490	389	n.a.	n.a.	n.a.	380	415
Guadeloupe	508	332	413	350	453	561	419	411
Martinique	408	438	356	497	351	447	338	410
Fiji	410	473	366	373	362	n.a.	299	397
Mauritius	317	399	378	n.a.	n.a.	n.a.	258	365
Greenland	432	358	256	312	445	425	266	361
Macau	422	n.a.	406	272	293	n.a.	201	348
Faeroe Islands	294	332	315	288	293	558	276	304
Bahamas	189	295	237	342	n.a.	n.a.	310	266
Malawi	228	243	208	n.a.	n.a.	n.a.	253	226
Congo	n.a.	n.a.	199	277	200	n.a.	92	225
New Caledonia	213	209	127	n.a.	n.a.	n.a.	174	183
French Guiana	138	306	136	131	180	246	90	178
Madagascar	176	77	188	184	261	137	290	177
Togo	148	n.a.	n.a.	n.a.	n.a.	n.a.	162	148
Benin	n.a.	101	n.a.	n.a.	n.a.	n.a.	62	101
Liberia	63	178	51	48	n.a.	n.a.	202	85
Niger	84	n.a.	n.a.	n.a.	n.a.	n.a.	88	84
Seychelles	75	125	69	26	122	n.a.	60	83
Samoa	51	n.a.	90	n.a.	n.a.	n.a.	28	71

Table 21. Imports of copper and copper alloys, worked, by country, 1976–1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Belize	n.a.	n.a.	n.a.	47	92	n.a.	73	70
Burkina Faso	78	86	41	n.a.	n.a.	n.a.	113	68
Yemen	43	n.a.	n.a.	n.a.	n.a.	n.a.	107	43
St. Lucia	42	n.a.	n.a.	n.a.	n.a.	n.a.	34	42
Bermuda	21	77	33	15	n.a.	n.a.	20	37
Vanuatu	1	n.a.	38	n.a.	n.a.	n.a.	n.a.	20
Mali	n.a.	13	n.a.	n.a.	n.a.	n.a.	38	13
St. Kitts and Nevis	12	14	13	n.a.	n.a.	n.a.	21	13
Dominica	10	n.a.	n.a.	n.a.	n.a.	n.a.	8	10
Sierra Leone	n.a.	n.a.	9	n.a.	n.a.	n.a.	11	9
Tuvalu	n.a.	1	n.a.	n.a.	n.a.	n.a.	n.a.	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	83 325	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15 014	n.a.
Iraq	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6 246	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4 907	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2 616	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 340	n.a.
Burma	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	519	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	384	n.a.
Afghanistan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	211	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	195	n.a.
United States Virgin Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	182	n.a.
Uganda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	99	n.a.
Haiti	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	92	n.a.
Burundi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	75	n.a.
Antigua and Barbuda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	39	n.a.
Gambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	23	n.a.
Central African Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	22	n.a.
St. Vincent and the Grenadines	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18	n.a.
Grenada	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	13	n.a.
Kiribati	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12	n.a.
Montserrat	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6	n.a.
Cayman Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Total World Market Economies	4 474 451	3 990 982	4 119 616	4 605 423	4 594 873	5 048 444	3 562 024	4 357 069

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Table 22. Imports of nickel ores and concentrates, nickel matte, nickel sinters and other intermediate products of nickel metallurgy, by country, 1976–1986 C.I.F. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Japan	334 859	307 781	237 597	256 843	260 594	223 628	291 480	279 535
Norway	280 647	160 560	133 441	218 187	231 059	202 296	201 027	204 779
United States	265 297	107 660	83 625	114 699	94 540	15 059	129 019	133 164
United Kingdom	184 031	61 964	103 243	135 260	117 483	85 242	134 320	120 396
Germany, Federal Republic of	71 870	71 631	41 215	50 999	56 184	39 357	64 476	58 380
France	85 201	42 539	25 746	27 498	46 576	38 697	58 090	45 512
Finland	30 825	33 681	37 464	32 921	35 051	26 718	17 848	33 988
Czechoslovakia	n.a.	24 124	24 589	28 818	n.a.	40 503	n.a.	25 844
Mexico	27 569	26 707	6 128	10 446	18 162	n.a.	14 436	17 802
Sweden	19 418	14 073	17 659	12 955	12 078	13 165	18 318	15 237
Netherlands	16 005	18 374	17 836	n.a.	8 448	22 754	11 860	15 166
Canada	14 180	13 223	15 984	10 932	19 979	27 542	27 930	14 860
Italy	10 730	10 126	9 394	18 110	16 626	18 137	21 862	12 997
Spain	13 463	10 902	10 526	10 212	8 307	6 512	8 590	10 682
India	5 343	n.a.	n.a.	n.a.	n.a.	n.a.	29	5 343
Belgium	2 714	1 626	1 983	9 744	7 255	9 057	1 306	4 664
Austria	4 373	4 098	2 453	4 559	5 562	3 478	5 742	4 209
Indonesia	3 211	6 052	n.a.	798	n.a.	148	12	3 354
South Africa	1 062	4 656	n.a.	n.a.	n.a.	n.a.	3 325	2 859
Turkey	3 362	2 939	3 269	4 342	128	119	1 639	2 808
Yugoslavia	727	1 386	314	43	2 105	805	524	915
Chile	13	860	971	717	418	1 398	46	596
Pakistan	288	285	1 045	243	250	503	93	422
Greece	6	14	203	772	1 013	20	2	402
Switzerland	365	342	383	366	449	268	300	381
Portugal	1 103	226	129	19	11	14	366	298
Singapore	5	2	1 408	29	2	37	12	289
Brazil	288	145	28	61	679	46	5 766	240
Venezuela	690	31	402	10	36	n.a.	31	234
Australia	1	169	225	46	605	1 524	8 589	209
Egypt	92	n.a.	n.a.	n.a.	177	n.a.	50	135
Israel	174	97	97	n.a.	54	197	53	106
Malaysia	77	53	34	50	298	278	28	102
New Zealand	4	308	1	37	30	5	166	76
Denmark	31	41	137	81	n.a.	55	113	73

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Table 22. Imports of nickel ores and concentrates, nickel matte, nickel sinters and other intermediate products of nickel metallurgy, by country, 1976-1986 C.I.F. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Ireland	145	80	54	2	16	3	38	59
Argentina	n.a.	n.a.	n.a.	109	6	145	n.a.	58
Jamaica	50	n.a.	n.a.	n.a.	n.a.	n.a.	2	50
Algeria	23	151	21	6	44	n.a.	1	49
Morocco	86	64	43	16	35	40	27	49
Bangladesh	n.a.	38	n.a.	n.a.	n.a.	n.a.	n.a.	38
Sri Lanka	31	n.a.	8	16	n.a.	2	5	18
Thailand	n.a.	15	n.a.	n.a.	n.a.	39	71	15
Colombia	1	4	32	13	n.a.	3	4	13
Jordan	n.a.	19	13	1	n.a.	1	n.a.	11
Tunisia	n.a.	n.a.	n.a.	n.a.	9	2	98	9
Dominican Republic	16	n.a.	4	n.a.	7	n.a.	6	9
Peru	n.a.	n.a.	n.a.	7	n.a.	6	n.a.	7
Barbados	n.a.	n.a.	n.a.	5	n.a.	n.a.	4	5
Cyprus	2	2	5	4	5	5	n.a.	4
Republic of Korea	n.a.	n.a.	3	n.a.	4	5	286	4
Macau	3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3
Panama	n.a.	n.a.	n.a.	2	n.a.	n.a.	2	2
French Polynesia	n.a.	1	3	n.a.	n.a.	n.a.	n.a.	2
Ethiopia	n.a.	n.a.	n.a.	1	3	n.a.	n.a.	2
New Caledonia	1	2	n.a.	n.a.	n.a.	n.a.	n.a.	2
Kenya	n.a.	n.a.	1	n.a.	n.a.	n.a.	4	1
Malta	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1
Martinique	n.a.	n.a.	1	n.a.	n.a.	n.a.	n.a.	1
Seychelles	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
Trinidad and Tobago	n.a.	n.a.	n.a.	n.a.	1	n.a.	n.a.	1
Philippines	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	89	n.a.
Saudi Arabia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	48	n.a.
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Mauritius	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Malawi	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Uruguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Bolivia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
United Republic of Tanzania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Fiji	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Total World Market Economies	1 351 944	884 860	759 916	910 917	914 626	737 572	1 021 397	964 453

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Table 23. Imports of nickel and nickel alloys, unwrought, by country, 1976-1986
C.I.F. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
United States	736 213	450 212	430 463	467 498	453 631	411 582	551 355	507 603
Germany, Federal Republic of	256 653	220 531	202 005	235 153	214 546	199 166	214 089	225 778
Japan	116 178	114 327	130 307	158 965	129 619	108 155	72 452	129 879
France	139 903	111 266	93 042	110 214	103 476	87 343	97 728	111 580
Italy	79 986	98 365	62 470	99 322	90 728	77 624	69 951	86 174
United Kingdom	114 076	86 932	53 723	75 422	82 468	64 684	95 176	82 524
Sweden	54 001	62 670	47 248	64 450	63 555	44 178	52 744	58 385
India	38 136	n.a.	n.a.	n.a.	n.a.	n.a.	15 296	38 136
Hong Kong	30 053	21 849	24 772	22 398	19 804	31 128	10 266	23 775
Spain	23 989	27 157	22 561	23 672	19 717	19 757	33 091	23 419
Canada	30 560	18 704	15 552	21 413	19 999	21 133	30 318	21 246
Finland	15 989	12 699	21 582	21 998	25 654	11 053	12 062	19 584
Belgium	15 715	21 417	19 021	14 109	13 083	15 415	15 721	16 669
Republic of Korea	26 326	14 403	10 029	11 152	18 074	26 487	8 766	15 997
Netherlands	24 413	19 352	14 312	8 277	9 141	12 905	21 644	15 099
Austria	16 328	11 922	11 682	13 869	13 260	12 761	12 683	13 412
Yugoslavia	14 805	6 530	7 492	13 317	15 439	10 903	8 499	11 517
Brazil	35 435	11 875	1 039	1 912	6 288	8 453	18 552	11 310
Australia	9 701	11 379	1 044	5 163	2 729	3 797	8 638	6 003
Singapore	4 000	2 455	13 920	1 791	5 667	4 898	1 063	5 567
Switzerland	7 231	5 178	3 994	4 127	6 089	5 948	7 856	5 324
Argentina	2 993	2 920	4 237	4 279	1 934	2 749	3 580	3 273
Thailand	2 763	2 741	2 737	2 390	1 841	2 444	839	2 494
Malaysia	5 709	1 581	795	1 280	416	371	10 130	1 956
South Africa	3 102	439	n.a.	n.a.	n.a.	n.a.	4 153	1 771
Chile	1 660	n.a.	n.a.	n.a.	n.a.	n.a.	1 443	1 660
Ireland	1 405	1 066	645	1 350	2 525	3 476	1 029	1 398
Portugal	1 713	1 534	1 257	1 086	1 400	1 553	1 464	1 398
Colombia	1 846	879	1 316	1 785	897	1 339	409	1 345
Denmark	779	952	1 082	1 830	834	979	971	1 095
Venezuela	1 354	1 233	501	1 018	1 218	n.a.	755	1 065
Norway	1 228	450	1 475	788	968	739	1 140	982
Turkey	25	9	178	10	3 751	4 947	59	795
Israel	881	1 015	641	580	362	418	381	696
Pakistan	340	847	557	432	1 084	1 134	233	652

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Table 23. Imports of nickel and nickel alloys, unwrought, by country, 1976–1986 C.I.F. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
New Zealand	794	622	250	825	576	92	196	613
Czechoslovakia	n.a.	n.a.	551	n.a.	n.a.	n.a.	n.a.	551
Greece	296	757	472	365	751	566	783	529
Philippines	515	548	630	91	180	249	366	393
United Arab Emirates	347	n.a.	n.a.	n.a.	n.a.	n.a.	17	347
Egypt	133	29	632	20	63	524	n.a.	175
Indonesia	59	209	353	39	45	n.a.	97	141
Syrian Arab Republic	179	69	111	127	n.a.	n.a.	64	122
Morocco	103	75	83	161	135	131	40	111
Guatemala	400	2	13	11	n.a.	n.a.	113	107
Peru	71	118	130	84	n.a.	771	230	101
Bolivia	71	n.a.	n.a.	n.a.	n.a.	n.a.	2	71
Uruguay	56	55	17	72	50	46	27	50
Cote d'Ivoire	n.a.	6	46	n.a.	69	n.a.	n.a.	40
Saudi Arabia	n.a.	28	n.a.	n.a.	n.a.	n.a.	3	28
Costa Rica	[illegible]	26	n.a.	21	n.a.	n.a.	13	25
Malta	2	1	9	14	46	14	2	14
Ethiopia	n.a.	n.a.	n.a.	17	10	n.a.	n.a.	14
Algeria	31	3	3	n.a.	n.a.	52	46	12
Ghana	14	6	n.a.	n.a.	n.a.	n.a.	149	10
Sri Lanka	n.a.	1	n.a.	n.a.	17	n.a.	8	9
Honduras	3	n.a.	3	n.a.	16	n.a.	1	7
Liberia	7	n.a.	n.a.	n.a.	n.a.	n.a.	5	7
Cyprus	5	12	5	7	3	n.a.	1	6
Bangladesh	4	n.a.	n.a.	n.a.	7	1	n.a.	6
Papua New Guinea	n.a.	4	n.a.	n.a.	n.a.	n.a.	n.a.	4
Nicaragua	n.a.	3	n.a.	n.a.	n.a.	n.a.	3	3
United Republic of Tanzania	3	n.a.	n.a.	n.a.	n.a.	n.a.	3	3
Panama	2	n.a.	n.a.	n.a.	2	n.a.	2	2
Mali	n.a.	2	n.a.	n.a.	n.a.	n.a.	n.a.	2
Martinique	n.a.	n.a.	n.a.	n.a.	2	1	n.a.	2
El Salvador	n.a.	n.a.	n.a.	1	n.a.	n.a.	3	1
Reunion	n.a.	n.a.	1	n.a.	n.a.	1	n.a.	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	227	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	48	n.a.

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Table 23. Imports of nickel and nickel alloys, unwrought, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Burma	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	40	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	28	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17	n.a.
Barbados	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Antigua and Barbuda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Jamaica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Libyan Arab Jamahiriya	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Ecuador	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Bermuda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Cameroon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total World Market Economies	1 829 332	1 362 717	1 219 838	1 400 986	1 341 948	1 187 085	1 397 435	1 430 964

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Table 24. Imports of nickel and nickel alloys, worked, by country, 1976-1986
C.I.F. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
United States	132 907	124 439	101 988	140 538	160 333	110 109	109 069	132 041
Germany, Federal Republic of	60 399	67 346	49 281	50 967	64 196	71 390	48 398	58 438
France	71 125	49 839	37 291	39 705	46 092	61 005	54 679	48 810
United Kingdom	43 219	32 421	34 527	49 813	61 416	53 270	41 868	44 279
Japan	31 014	24 520	31 717	35 068	44 327	51 137	25 228	33 329
Canada	43 042	31 075	24 731	26 616	28 678	26 539	41 502	30 828
Italy	33 071	31 957	22 568	25 116	28 325	38 973	26 089	28 207
Switzerland	23 459	14 479	12 230	16 513	22 626	23 601	17 840	17 861
Netherlands	13 203	22 143	12 922	9 886	11 500	13 408	14 788	13 931
Mexico	19 132	11 231	5 763	12 017	11 308	n.a.	9 299	11 890
Belgium	11 860	13 476	8 075	8 260	15 671	10 961	18 422	11 468
India	10 872	n.a.	n.a.	n.a.	n.a.	n.a.	11 473	10 872
Sweden	13 253	10 948	8 829	8 800	9 706	8 446	12 403	10 307
Indonesia	23 040	7 528	7 166	5 959	5 671	15 757	5 704	9 873
Yugoslavia	9 787	8 550	8 945	7 182	6 582	7 539	6 503	8 209
Republic of Korea	5 675	6 632	7 724	8 316	9 123	9 246	4 552	7 494
Australia	10 921	7 343	4 049	6 142	6 679	8 339	8 756	7 027
Austria	5 630	5 557	5 264	5 423	9 835	9 222	7 151	6 342
Spain	5 278	5 600	7 251	5 441	6 461	10 741	9 365	6 006
Hong Kong	4 309	2 847	4 514	8 060	8 729	3 074	2 856	5 692
South Africa	6 632	4 302	n.a.	n.a.	n.a.	n.a.	6 008	5 467
Malta	5 634	7 613	10 187	998	205	246	4 334	4 927
Thailand	8 231	7 941	1 713	3 059	2 859	2 190	2 741	4 761
Israel	4 536	4 274	3 880	4 553	5 034	5 695	2 780	4 455
Brazil	6 078	7 118	3 161	2 275	2 629	2 489	9 610	4 252
Ireland	2 436	2 182	2 436	6 038	3 476	4 236	2 004	3 314
Algeria	2 020	4 636	1 048	4 567	2 902	828	750	3 035
Malaysia	1 125	2 275	4 095	3 653	1 756	2 641	3 693	2 581
Portugal	2 883	3 316	2 674	1 993	1 655	1 660	3 122	2 504
Morocco	2 014	3 336	2 177	2 289	2 111	1 315	3 025	2 385
Norway	2 277	2 196	1 998	2 809	2 597	3 673	2 101	2 375
Argentina	2 279	1 507	2 409	2 316	2 017	2 137	2 368	2 106
Singapore	1 964	1 578	1 592	1 822	3 472	5 481	1 702	2 086
Venezuela	3 000	1 395	1 131	1 604	3 186	n.a.	2 176	2 063
Denmark	1 968	1 874	1 574	1 888	1 974	3 335	1 985	1 856

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Table 24. Imports of nickel and nickel alloys, worked, by country, 1976–1986 C.I.F. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Cote d'Ivoire	1 846	1 697	1 766	n.a.	768	n.a.	393	1 519
Turkey	1 458	1 321	1 332	1 248	1 615	879	819	1 395
Colombia	1 367	1 325	1 472	1 149	1 333	955	1 442	1 329
Finland	1 646	1 289	1 027	894	1 176	1 761	1 071	1 206
New Zealand	1 388	1 287	972	802	1 250	942	1 784	1 140
Saudi Arabia	778	1 276	n.a.	n.a.	n.a.	n.a.	1 338	1 027
Pakistan	1 338	462	532	926	774	325	737	806
Egypt	404	1 329	462	406	133	639	840	547
Chile	803	218	301	578	722	739	428	524
Peru	624	470	240	466	n.a.	850	569	450
Senegal	424	n.a.	n.a.	n.a.	n.a.	n.a.	573	424
Greece	515	442	413	336	332	561	704	408
Philippines	386	509	460	226	362	420	750	389
Tunisia	212	210	252	215	286	370	121	235
Ecuador	142	207	262	297	n.a.	n.a.	167	227
Ethiopia	51	13	n.a.	629	56	n.a.	52	187
Sudan	168	n.a.	n.a.	n.a.	n.a.	n.a.	22	168
United Arab Emirates	115	199	n.a.	n.a.	n.a.	n.a.	816	157
Nepal	n.a.	n.a.	250	174	11	n.a.	n.a.	145
Bangladesh	253	88	109	111	140	169	192	140
Uruguay	251	28	127	37	63	145	227	101
Jamaica	65	123	n.a.	n.a.	n.a.	n.a.	99	94
Barbados	122	87	70	97	64	64	50	88
Kenya	158	77	23	n.a.	n.a.	n.a.	131	86
Niger	83	n.a.	n.a.	n.a.	n.a.	n.a.	31	83
Mali	n.a.	70	n.a.	n.a.	n.a.	n.a.	1	70
Jordan	96	36	61	65	69	57	33	65
Libyan Arab Jamahiriya	1	126	n.a.	n.a.	n.a.	n.a.	42	64
Syrian Arab Republic	18	44	32	152	n.a.	n.a.	7	62
Brunei Darussalam	19	60	53	104	64	n.a.	56	60
Sri Lanka	34	134	41	57	32	72	86	60
Costa Rica	36	80	n.a.	58	n.a.	n.a.	65	58
Trinidad and Tobago	16	101	39	68	54	15	31	56
Guatemala	50	55	45	63	n.a.	n.a.	62	53
Dominican Republic	112	74	62	5	3	n.a.	49	51

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Table 24. Imports of nickel and nickel alloys, worked, by country, 1976-1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Cyprus	32	38	66	51	54	45	40	48
Bolivia	113	45	33	1	n.a.	n.a.	46	48
Qatar	64	14	n.a.	n.a.	n.a.	n.a.	n.a.	39
Gabon	76	12	20	n.a.	n.a.	n.a.	39	36
Papua New Guinea	28	23	n.a.	n.a.	n.a.	n.a.	n.a.	26
Reunion	4	3	16	53	36	1	2	22
Honduras	28	18	15	26	24	n.a.	15	22
United Republic of Tanzania	21	n.a.	n.a.	n.a.	n.a.	n.a.	34	21
French Polynesia	24	15	n.a.	n.a.	n.a.	n.a.	20	20
Congo	n.a.	n.a.	10	39	6	n.a.	469	18
El Salvador	20	9	n.a.	18	n.a.	n.a.	9	16
Iceland	17	14	15	10	19	26	19	15
Nicaragua	22	5	n.a.	15	n.a.	n.a.	8	14
Malawi	16	12	9	n.a.	n.a.	n.a.	5	12
Martinique	1	6	25	22	3	6	n.a.	11
Guadeloupe	n.a.	7	22	7	6	14	8	11
Yemen	9	n.a.	n.a.	n.a.	n.a.	n.a.	31	9
Mauritius	18	4	3	n.a.	n.a.	n.a.	6	8
Panama	1	16	5	7	4	n.a.	14	7
Cameroon	n.a.	5	n.a.	n.a.	n.a.	70	29	5
Madagascar	9	4	4	1	6	9	3	5
New Caledonia	3	6	3	n.a.	n.a.	n.a.	2	4
Togo	4	n.a.	n.a.	n.a.	n.a.	n.a.	1	4
Macau	n.a.	n.a.	4	4	4	n.a.	n.a.	4
Fiji	n.a.	n.a.	6	1	n.a.	n.a.	3	4
Tuvalu	3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3
Paraguay	n.a.	n.a.	n.a.	1	4	5	2	3
Samoa	2	n.a.	3	n.a.	n.a.	n.a.	1	3
Bermuda	2	1	n.a.	n.a.	n.a.	n.a.	4	2
Greenland	1	n.a.	n.a.	1	2	2	7	1
Burkina Faso	1	n.a.	n.a.	n.a.	n.a.	n.a.	2	1
Seychelles	n.a.	n.a.	n.a.	1	n.a.	n.a.	n.a.	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 610	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	865	n.a.
United States Virgin Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	118	n.a.

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Table 24. Imports of nickel and nickel alloys, worked, by country, 1976–1986
C.I.F. value
(continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
Bahrain	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	89	n.a.
Lebanon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	46	n.a.
Benin	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	45	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	25	n.a.
Burma	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	23	n.a.
Iraq	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	14	n.a.
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	13	n.a.
St. Lucia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9	n.a.
French Guiana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Dominica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5	n.a.
Central African Republic	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4	n.a.
Uganda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Grenada	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3	n.a.
Guyana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Belize	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Haiti	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
St. Kitts and Nevis	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	n.a.
Faeroe Islands	n.a.	n.a.	n.a.	n.a.	n.a.	13	n.a.	n.a.
Total World Market Economies	601 806	555 831	469 318	539 234	628 589	604 150	545 306	558 956

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Table 25. Imports of manganese ores and concentrates, by country, 1976-1986 C.I.F. value

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Japan	160 501	139 931	93 549	117 259	118 939	93 517	149 827	126 036
France	66 046	64 381	48 854	59 385	63 196	48 256	71 776	60 372
Norway	37 037	52 761	41 940	48 085	45 537	51 228	51 506	45 072
United States	56 742	22 743	24 437	25 817	26 023	30 270	52 744	31 152
Italy	25 713	23 313	34 946	25 158	22 522	21 951	21 183	26 330
Germany, Federal Republic of	30 842	19 298	18 269	21 716	12 827	21 023	23 925	20 590
Spain	20 619	19 606	14 417	25 665	18 269	14 818	29 979	19 715
United Kingdom	16 869	11 229	18 181	14 183	20 101	12 321	23 393	16 113
Republic of Korea	20 635	15 294	11 517	14 565	16 078	13 087	9 071	15 618
Poland	16 443	18 823	12 227	14 322	12 629	11 447	24 670	14 889
Belgium	17 737	15 578	10 050	13 388	13 770	12 400	19 347	14 105
Singapore	18 129	15 454	10 635	8 047	7 649	6 348	6 586	11 983
Canada	18 062	11 977	5 865	9 107	12 074	11 886	12 493	11 417
Yugoslavia	7 305	9 265	9 938	10 305	9 825	8 461	8 120	9 328
Portugal	7 456	7 706	3 758	11 186	7 605	7 357	9 134	7 542
Netherlands	6 071	7 260	6 316	7 334	9 267	n.a.	6 465	7 250
Mexico	5 762	5 119	5 823	9 001	10 347	n.a.	4 040	7 210
Argentina	4 504	8 831	5 887	1 912	3 863	2 835	5 382	4 999
Czechoslovakia	n.a.	7 680	312	n.a.	n.a.	n.a.	n.a.	3 996
Venezuela	2 493	4 642	307	1 975	3 065	n.a.	488	2 496
Brazil	3 339	2 738	4 229	247	843	486	5 297	2 279
South Africa	1 913	1 103	n.a.	n.a.	n.a.	n.a.	1 322	1 508
Cameroon	n.a.	1 456	n.a.	n.a.	n.a.	1 253	131	1 456
India	1 325	n.a.	n.a.	n.a.	n.a.	n.a.	1 316	1 325
Indonesia	2 503	1 797	1 177	639	489	680	2 113	1 321
Philippines	666	1 077	1 674	1 477	1 160	1 290	1 174	1 211
Ireland	423	753	1 378	1 770	1 629	2 181	1 372	1 191
Greece	3	2 082	n.a.	n.a.	667	66	889	917
Kenya	941	717	886	n.a.	n.a.	n.a.	649	848
Pakistan	58	n.a.	12	1 429	1 525	28	37	756
Colombia	844	949	295	860	601	1 342	779	710
Sweden	273	1 504	1 150	198	128	865	645	651
Israel	423	642	720	699	n.a.	n.a.	207	621
Malaysia	556	498	611	550	438	404	636	531
Saudi Arabia	65	992	n.a.	n.a.	n.a.	n.a.	35	529
Australia	512	166	436	603	896	1 158	345	523
Cote d'Ivoire	330	647	561	n.a.	514	n.a.	319	513
Egypt	143	23	1 309	n.a.	n.a.	114	9	492
Sri Lanka	506	606	478	651	131	48	407	474
Sudan	436	n.a.	n.a.	n.a.	n.a.	n.a.	332	436

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Table 25. Imports of manganese ores and concentrates, by country, 1976–1986 C.I.F. value (continued)

(Thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5–year average (1976–80)	5–year average (1981–85)
Turkey	213	545	573	364	331	273	384	405
Peru	7	705	290	536	n.a.	650	294	385
Jamaica	515	240	n.a.	n.a.	n.a.	n.a.	236	378
Finland	63	296	457	273	736	473	927	365
Dominican Republic	191	279	343	204	180	n.a.	189	239
Bangladesh	n.a.	54	285	380	128	299	50	212
Madagascar	n.a.	367	119	n.a.	1	64	1 409	162
New Zealand	187	95	322	38	42	31	79	137
Denmark	144	121	82	89	221	165	345	131
Congo	n.a.	n.a.	n.a.	n.a.	117	n.a.	n.a.	117
Trinidad and Tobago	n.a.	109	n.a.	n.a.	n.a.	2 031	2	109
Austria	115	112	72	89	113	121	118	100
Morocco	123	55	124	106	38	227	167	89
Hong Kong	n.a.	n.a.	26	18	28	72	65	24
Macau	n.a.	n.a.	3	13	n.a.	n.a.	n.a.	8
Thailand	2	n.a.	n.a.	5	1	n.a.	361	3
Bolivia	2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2
Senegal	1	n.a.	n.a.	n.a.	n.a.	n.a.	40	1
Panama	n.a.	n.a.	1	n.a.	n.a.	n.a.	n.a.	1
Niger	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	464	n.a.
Chile	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	108	n.a.
United States Virgin Islands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	29	n.a.
Uganda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	22	n.a.
Algeria	n.a.	n.a.	n.a.	n.a.	n.a.	2	2	n.a.
Tunisia	n.a.	n.a.	n.a.	n.a.	n.a.	103	n.a.	n.a.
Total World Market Economies	536 751	476 692	378 448	439 815	428 896	367 837	531 802	452 120

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Table 26. Imports of ferromanganese, by country, 1976–1986 C.I.F. value

(thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976–80)	5-year average (1981–85)
United States	243 159	156 245	98 754	124 823	75 535	124 722	201 092	139 703
Italy	45 967	48 543	24 184	44 559	31 752	39 762	48 509	39 001
Germany, Federal Republic of	40 902	37 600	34 619	31 445	46 762	44 356	63 499	38 266
United Kingdom	27 628	25 343	32 943	15 758	18 202	23 343	37 909	23 975
Belgium	35 342	20 289	18 811	18 441	19 987	20 830	32 155	22 574
Canada	25 241	14 369	11 635	15 839	14 900	12 164	17 658	16 517
France	12 852	10 487	6 708	13 783	13 975	29 511	15 421	11 561
Sweden	13 611	10 827	9 528	11 114	10 512	11 082	14 914	11 118
Austria	9 548	10 261	n.a.	n.a.	n.a.	n.a.	9 612	9 905
Turkey	8 870	11 648	7 209	8 899	9 254	7 660	7 493	9 176
Venezuela	5 426	8 944	4 185	13 308	10 030	n.a.	10 707	8 379
Netherlands	7 766	7 497	5 259	9 353	7 878	7 614	9 625	7 551
Indonesia	1 397	2 623	4 229	7 543	5 415	5 334	1 090	4 241
Japan	2 668	4 262	4 485	4 293	1 615	2 419	2 916	3 465
Republic of Korea	3 703	4 096	5 471	2 395	1 080	872	1 456	3 349
Malaysia	1 579	2 114	2 859	5 204	4 203	4 585	1 118	3 192
Thailand	2 131	1 668	1 936	2 286	2 624	2 555	1 101	2 129
Australia	2 889	1 233	856	1 887	3 759	3 759	4 389	2 125
Algeria	1 062	4 338	366	3 688	506	1 523	846	1 992
Colombia	1 321	1 443	998	3 641	2 231	3 102	1 981	1 927
Pakistan	1 392	1 964	2 040	1 984	2 218	3 562	1 365	1 920
Finland	1 777	2 202	1 399	2 048	1 661	1 940	1 491	1 817
Egypt	827	1 968	614	1 880	3 132	3 934	n.a.	1 684
Greece	1 281	2 016	624	1 117	2 441	2 200	1 318	1 496
Peru	243	1 115	1 453	1 325	n.a.	940	1 193	1 034
Yugoslavia	619	430	1 338	1 051	1 254	1 238	754	938
Singapore	303	1 420	155	449	2 288	1 160	1 009	923
Denmark	1 373	1 065	638	809	697	679	2 669	916
Hong Kong	218	785	219	2 146	750	998	180	824
Philippines	681	1 146	1 454	507	280	724	1 471	814
Brazil	n.a.	n.a.	n.a.	n.a.	678	47	59	678
Argentina	363	200	698	391	1 511	952	772	633
Israel	458	753	405	562	637	409	571	563
Trinidad and Tobago	412	1 509	139	442	252	159	10	551
Spain	301	664	685	377	482	2 254	515	502

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Table 26. Imports of ferromanganese, by country, 1976-1986
C.I.F. value
(continued)

(thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Mexico	641	546	291	357	487	n.a.	1 296	464
New Zealand	477	614	614	157	260	502	799	424
Chile	425	164	666	236	280	345	147	354
Ireland	298	266	463	304	93	161	287	285
Syrian Arab Republic	626	58	93	316	n.a.	n.a.	270	273
Bangladesh	n.a.	n.a.	3	741	58	703	630	267
South Africa	322	132	n.a.	n.a.	n.a.	n.a.	49	227
Ghana	193	224	n.a.	n.a.	n.a.	n.a.	821	209
Jordan	n.a.	n.a.	218	185	n.a.	n.a.	137	202
Ethiopia	18	497	n.a.	72	n.a.	n.a.	22	196
Ecuador	99	212	199	118	n.a.	n.a.	57	157
Kenya	185	109	115	n.a.	n.a.	n.a.	213	136
Tunisia	127	107	88	83	229	144	135	127
Portugal	98	158	100	77	160	201	137	119
Bolivia	61	139	101	118	n.a.	n.a.	55	105
Uruguay	49	83	93	158	82	120	110	93
Morocco	119	99	104	63	59	103	115	89
Dominican Republic	1	32	51	52	132	n.a.	79	54
Madagascar	n.a.	42	39	34	95	105	29	53
Sri Lanka	49	3	91	5	44	5	27	38
Jamaica	32	n.a.	n.a.	n.a.	n.a.	n.a.	56	32
Cyprus	47	35	17	18	18	11	24	27
Cote d'Ivoire	10	18	19	n.a.	29	n.a.	18	19
Norway	75	4	9	1	1	n.a.	95	18
Malta	n.a.	n.a.	6	24	n.a.	1	3	15
Papua New Guinea	8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8
United Arab Emirates	9	4	n.a.	n.a.	n.a.	n.a.	30	7
Barbados	n.a.	n.a.	n.a.	n.a.	4	n.a.	n.a.	4
Panama	n.a.	n.a.	n.a.	n.a.	4	n.a.	n.a.	4
Senegal	3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3
Mauritius	1	n.a.	n.a.	n.a.	n.a.	n.a.	2	1
Paraguay	n.a.	n.a.	n.a.	n.a.	1	n.a.	2	1
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 474	n.a.
Saudi Arabia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	765	n.a.
Iraq	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	419	n.a.

Table 26. Imports of ferromanganese, by country, 1976-1986
C.I.F. value
(continued)

(thousands of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average. (1976-80)	5-year average (1981-85)
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	381	n.a.
Nigeria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	297	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	120	n.a.
India	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	14	n.a.
Burma	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	11	n.a.
New Caledonia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8	n.a.
Fiji	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	n.a.
Iceland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total World Market Economies	527 210	409 830	312 325	395 219	321 818	471 765	507 164	393 280

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Table 27. Total exports of developing land-based producer States, by country, 1976-1986 F.O.B. value

(millions of US dollars)

Country/Territory	1981	1982	1983	1984	1985	1986	5-year average (1976-80)	5-year average (1981-85)
Algeria	13 296	11 476	11 158	11 886	10 149	7 831	8 479	11 593
Argentina	9 141	7 623	7 836	8 107	8 396	6 852	6 355	8 221
Bolivia	983	896	818	781	672	n.a.	791	830
Botswana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Brazil	23 292	20 173	21 898	26 976	25 594	n.a.	14 057	23 587
Burma	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	193	n.a.
Chile	3 745	3 579	3 620	3 547	3 665	4 158	3 124	3 631
Congo	n.a.	n.a.	640	1 183	1 087	n.a.	395	970
Cuba	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4 397	n.a.
Cyprus	559	554	494	575	476	506	381	532
Dominican Republic	991	628	648	n.a.	n.a.	n.a.	688	756
Ecuador	2 168	2 291	2 226	2 582	n.a.	n.a.	1 767	2 317
Egypt	3 232	3 120	3 215	3 140	3 714	2 934	1 971	3 284
Gabon	1 700	1 566	1 475	n.a.	n.a.	n.a.	1 500	1 580
Ghana	842	705	n.a.	n.a.	n.a.	n.a.	904	774
Guatemala	1 115	1 084	1 118	1 095	n.a.	n.a.	1 136	1 103
India	7 867	8 468	n.a.	n.a.	n.a.	n.a.	6 395	8 168
Indonesia	22 260	22 293	21 145	21 888	18 587	14 787	13 710	21 235
Iran (Islamic Republic of)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24 261	n.a.
Malaysia	11 734	12 027	14 100	16 484	15 632	13 830	8 555	13 995
Mauritania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	20 036	21 170	24 642	26 563	24 365	n.a.	7 662	23 355
Morocco	2 320	2 059	2 062	2 172	2 165	2 428	1 687	2 156
Mozambique	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Namibia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
New Caledonia	343	266	155	n.a.	n.a.	n.a.	321	255
Pakistan	2 738	2 348	3 062	2 556	2 708	3 303	1 674	2 682
Papua New Guinea	864	791	n.a.	n.a.	n.a.	n.a.	420	827
Peru	2 335	2 756	2 009	2 460	n.a.	n.a.	2 279	2 390
Philippines	5 712	5 012	4 967	5 266	4 589	4 730	3 840	5 109
Republic of Korea	21 200	21 850	24 437	29 248	30 283	34 702	12 546	25 403
Sudan	501	n.a.	n.a.	n.a.	n.a.	n.a.	555	501
Thailand	6 849	6 797	6 275	7 279	7 056	8 786	4 395	6 851
Turkey	4 702	5 747	5 671	7 134	7 958	7 457	2 234	6 242
Uganda	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	351	n.a.
Vanuatu	16	11	18	n.a.	n.a.	n.a.	13	15
Venezuela	17 518	n.a.	14 501	n.a.	n.a.	n.a.	12 380	16 009
Zaire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	940	n.a.
Zambia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1 043	n.a.
Zimbabwe	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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Table 28. Gross domestic product (GDP) of developing land-based producer States, by country, 1976–1985

(millions of US dollars)

Country/Territory	1981	1982	1983	1984	1985	5-year average (1976–80)	5-year average (1981–85)
Algeria	43 118	43 904	45 787	49 017	58 653	27 862	48 096
Argentina	76 044	30 436	29 349	29 583	49 561	68 655	42 995
Bolivia	154 000	210 000	n.a.	n.a.	n.a.	81 800	182 000
Botswana	885	968	1 105	1 014	885	667	972
Brazil	193 258	190 308	120 117	121 849	134 040	159 660	151 914
Burma	5 797	6 019	6 059	6 185	7 362	4 841	6 284
Chile	32 644	16 875	17 796	14 764	14 014	15 882	19 219
Congo	1 885	2 116	1 915	1 999	2 458	1 072	2 075
Cuba	17 588	18 178	18 855	19 311	19 440	14 854	18 674
Cyprus	2 012	2 080	2 021	2 043	2 619	1 441	2 155
Dominican Republic	7 267	7 953	8 565	10 706	4 924	5 081	7 883
Ecuador	13 946	12 540	10 356	12 097	11 610	8 143	12 110
Egypt	28 986	34 486	41 735	52 366	64 049	21 128	44 324
Gabon	3 579	3 465	3 162	3 220	4 486	3 086	3 582
Ghana	26 409	31 437	6 134	5 411	6 218	9 772	15 122
Guatemala	8 608	8 717	9 050	9 470	11 130	6 140	9 395
India	162 304	171 411	184 940	172 177	200 198	123 174	178 206
Indonesia	83 893	86 112	74 142	81 057	83 992	48 623	81 839
Iran (Islamic Republic of)	104 756	128 921	155 959	159 901	181 719	81 966	146 251
Malaysia	25 694	26 959	29 750	32 804	31 958	17 424	29 433
Mauritania	884	806	805	661	631	627	757
Mexico	223 957	97 607	119 097	149 299	122 647	114 263	142 521
Morocco	14 389	14 374	11 740	11 050	12 437	13 584	12 798
Mozambique	163 322	180 055	192 377	208 976	243 796	108 478	197 705
Namibia	1 498	1 710	1 820	2 025	2 100	989	1 831
New Caledonia	96 304	108 093	114 161	119 860	130 600	77 094	113 804
Pakistan	32 509	28 206	30 978	30 593	33 028	20 884	31 063
Papua New Guinea	2 471	2 339	2 254	2 306	2 264	2 065	2 327
Peru	18 729	15 477	12 644	11 429	11 329	12 019	13 922
Philippines	37 227	37 138	27 431	27 298	32 055	25 478	32 230
Republic of Korea	67 129	70 663	76 685	83 233	84 226	47 431	76 387
Sudan	7 102	5 743	7 258	8 618	5 196	8 195	6 783
Thailand	34 181	36 788	40 214	36 422	39 075	23 860	37 336
Turkey	47 999	46 160	40 778	40 951	47 687	48 746	44 715
Uganda	131 595	131 245	73 470	43 993	23 311	789 267	80 723
Vanuatu	95	98	100	119	128	105	108
Venezuela	66 443	67 855	67 556	46 337	49 604	42 950	59 559
Zaire	4 351	5 414	1 963	3 017	2 602	4 968	3 470
Zambia	3 948	3 867	2 768	2 241	1 237	3 013	2 812
Zimbabwe	6 190	5 612	5 547	4 457	4 935	4 009	5 348

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Table 29. Exports of copper, nickel and manganese by developing land-based producer States, as percentages of their total exports and gross domestic product (GDP), by country, average of 1981-1985

Country/territory	Copper ore	Copper unwrought	Copper worked	Copper scrap	Nickel ore	Nickel and nickel alloys	Manganese ore	Ferro-manganese	Total exports of 3 minerals	Total exports of 3 minerals as	
										% of GDP	% of country exports
					(Thousands of US dollars)						
Algeria	375	71	9	2 139	0	3	0	0	2 590	0.01	0.02
Argentina	0	49	1 903	17	32	9	3	0	2 012	0.00	0.02
Bolivia	2 816	0	0	0	0	49	4	0	2 869	0.00	0.35
Botswana	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Brazil	5 020	167	33 749	0	396	338	44 475	9 720	93 865	0.06	0.40
Burma	0	0	0	0	0	0	0	0	0	0.00	0.00
Chile	125 822	1 280 711	27 598	223 103	151	281	0	83	1 657 749	8.63	45.65
Congo	177	0	6	124	0	0	0	0	307	0.01	0.03
Cuba	0	0	0	0	0	0	0	0	0	0.00	0.00
Cyprus	945	0	16	550	1	0	0	0	1 512	0.07	0.28
Dominican Republic	0	0	29	12	0	19	0	0	60	0.00	0.01
Ecuador	475	0	0	0	0	0	0	0	475	0.00	0.02
Egypt	0	0	7	0	0	0	13	0	20	0.00	0.00
Gabon	0	0	0	215	0	0	90 935	0	91 150	2.54	5.77
Ghana	0	0	0	0	0	0	6 693	0	6 693	0.04	0.87
Guatemala	47	35	165	0	0	0	0	0	247	0.00	0.02
India	0	417	1 853	0	0	33	12 004	0	14 307	0.01	0.18
Indonesia	114 537	0	980	0	138 324	30	4 816	0	258 686	0.32	1.22
Iran (Islamic Republic of	0	0	0	0	0	0	0	0	0	0.00	0.00
Malaysia	65 272	87	2 669	9 846	0	185	58	31	78 155	0.27	0.56
Mauritania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	172 006	45 808	16 953	4 334	87	77	11 432	12 070	262 766	0.18	1.13
Morocco	20 702	0	7	2 315	0	0	8 621	0	31 644	0.25	1.47
Mozambique	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Namibia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
New Caledonia	175	0	7	0	47 886	0	0	0	48 068	0.04	18.89
Pakistan	23	0	73	1 526	0	0	0	0	1 622	0.01	0.06
Papua New Guinea	418 370	0	4	159	0	0	0	0	418 533	17.99	50.59
Peru	24 514	226 566	14 676	0	2 677	0	0	0	268 433	1.93	11.23
Philippines	238 599	76 870	1 963	3 561	31 586	11 732	88	26	364 425	1.13	7.13
Republic of Korea	9	14 302	54 588	1 460	9	36	0	121	70 525	0.09	0.28
Sudan	0	0	0	0	0	0	0	0	0	0.00	0.00
Thailand	0	24	121	0	0	0	9 854	0	9 998	0.03	0.15
Turkey	0	2 056	17 084	0	112	84	152	1	19 488	0.04	0.31
Uganda	0	0	0	0	0	0	0	0	0	0.00	0.00
Vanuatu	0	0	0	0	0	0	0	0	0	0.00	0.00
Venezuela	0	0	357	398	0	1	0	0	756	0.00	0.00
Zaire	0	0	0	0	0	0	0	0	0	0.00	0.00
Zambia	0	0	0	0	0	0	0	0	0	0.00	0.00
Zimbabwe	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
